

AMPRO

User's Manual

DLP™ Projector

Model 5200



5200 User's Manual / PN 71165 / Revision A

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Limited Warranty

AmPro Corporation warrants this product to be free from defects in material and workmanship under normal operation, subject to the limitations provided below.

Warranty Period	For the first twelve (12) months after date of installation, but limited to a maximum of fifteen (15) months from date of shipment from the factory, AmPro Corporation will repair or replace any defective part, exclusive of lamp warranty of ninety (90) days against failure to start and a maximum fifty (50) hours of operation, without charge of labor or parts. Replacement parts will be covered by this limited warranty for the remainder of the warranty period. This Limited Warranty applies only to parts supplied or designed by AmPro Corporation.
Date Of Installation	To establish the date of installation, The AmPro Certificate of Registration should be completed, signed and returned to AmPro Corporation, postmarked no later than thirty (30) days from date of installation. If the AmPro Certificate of Registration is not returned within such time, AmPro Corporation will use the date that the projector was shipped from the factory as the date of installation.
Original Purchaser	This Limited Warranty is limited to the original purchaser (end-user) of this product from either AmPro Corporation or an AmPro Corporation authorized dealer, distributor or agent.
Warranty Service	For service under this Limited Warranty, this product must be presented to AmPro Corporation, an authorized AmPro Corporation service center or the authorized AmPro Corporation selling dealer.
Shipping	Prior to shipping this product or any sub-assembly to AmPro Corporation, a Return Authorization Number (RA#) must be obtained from the AmPro Corporation Customer Service Department. The product must be shipped in the manufacturer's original shipping container or other AmPro Corporation approved packaging. The purchaser must prepay all freight and shipping charges of this product to AmPro Corporation. Damage resulting from abuse in shipment of this product is not covered by this Limited Warranty. AmPro Corporation approved shipping containers are available from AmPro Corporation for a nominal charge.
Environmental Damage	This Limited Warranty does not cover damage or repairs that are necessary due to floods, winds, fires, lighting, accidents, corrosive atmosphere, excessive exposure to water (moisture) or heat, or any other conditions beyond the control of AmPro Corporation.
Serial Number Defacement	This Limited Warranty is void for this product if the serial number has been changed, removed or defaced.
Other	<p>This Limited Warranty does not cover repairs that are necessary due to:</p> <ul style="list-style-type: none">◆ Incorrect installation.◆ Voltage conditions, blown fuses, open circuit breakers or any other inadequacy or interruption of properly grounded electrical service.◆ Misapplication, abuse, improper servicing, or any other improper operation, including mis-adjustments of any controls.◆ Defects in or caused by associated equipment.◆ Repair and/or modification of a sub-assembly performed by other than AmPro Corporation factory personnel.◆ Usage not in accordance with product instructions◆ Failure to perform required preventative maintenance.◆ This warranty does not cover any items that are in the following categories:<ul style="list-style-type: none">■ Software -refer to the Software manufacturer for warranty■ External devices (except as specifically noted).■ Accessories or parts added to the projector, after the projector is shipped from AmPro Corporation. Accessories or parts that are not installed at the factory that are included on the product standard price list and purchased from AmPro Corporation or an authorized AmPro dealer or AmPro Service Center are covered under this warranty.



NOTICE-PC/ALICE Configuration The ALICE projector operates with an internal PC. DO NOT make any changes to the operating system and the ALICE program, without prior authorization from the factory. Failure to comply may result in warranty cancellation. Should AmPro be required to restore the projector back to its original configuration, AmPro WILL charge for labor and/or travel (shipping to-from the factory) and/or materials required to do so.



Normal Maintenance as outlined in the installation and servicing instructions of this User's Manual will be the responsibility of the purchaser.

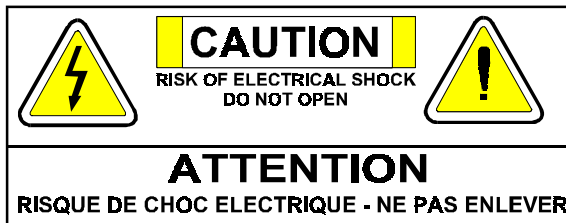
AmPro Corporation makes no warranty of any kind, express or implied, in connection with this product except as herein above provided. Implied warranties of merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade are specifically excluded. Should this product prove to be defective in material or workmanship, the purchaser's sole remedy shall be such repair or replacement as herein above expressly provided and under no circumstances shall AmPro Corporation be liable for any loss, or damage, direct, incidental or consequential, including loss, or loss of profits or business opportunities, resulting from dealer or distributor installation or services.

Some states do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This Limited Warranty gives you specific legal rights, and you may also have other rights, which may vary, from state to state or country. NO other person is authorized to assume for AmPro Corporation any additional obligations beyond those provided herein.

Warnings and Important Notes

First Before operating this equipment, please read this manual carefully and completely. This manual will provide you with the necessary information of the many functions and features, and the necessary instructions for operation of this equipment.

Note Data presented in this manual has been carefully reviewed for accuracy and reliability; however, no responsibility is assumed for inaccuracies. The information contained in this manual is subject to change without prior notice.



This symbol is intended to alert the user that parts inside this product are a risk of electrical shock to persons.



This symbol is intended to alert the user that important operating instructions are in the accompanying literature.



CAUTION
Electrostatic
Sensitive
Devices

This symbol is intended to alert the user that electrostatic sensitive devices are employed in this product. When working inside the equipment, handling or transporting printed circuit boards protect against "Electrostatic Discharge".

WARNING!
Bright Light
Source

This unit has an extremely bright light source. Do not look directly into the lens or the beam of light. Be especially careful that children do not stare directly into the light.

WARNING!
Electrical Shock

To reduce the risk of electrical shock, do not expose this product to rain or moisture.

WARNING!
UV Radiation

The lamp contained in this product is an intense source of light and heat. One component of the light emitted from this lamp is ultraviolet light. **DO NOT LOOK INTO THE LENS ASSEMBLY!** Potential eye and skin hazards are present when the lamp is energized due to ultraviolet radiation. Avoid unnecessary exposure.

Some medications are known to make individuals extra sensitive to UV radiation.


Main AC Line

The AmPro 5200 Series is auto ranging from 90-240 VAC. There is no need to pre-configure any switches.

WARNING! AC
Ground

For your safety and proper operation of the projector, the projector **MUST BE** connected to a properly wired and grounded outlet. An improperly grounded system can place hazardous voltages on accessible metal parts of the projector and voids the warranty due to potential damage to the projector.

Warnings and Important Notes

- Power Source Interruptions** The 5000 Series of projector operation is based on a computer system, not unlike your desktop computer. Since computer systems are very sensitive to variations in voltage supplied by the AC power source. Over-voltage, under-voltage and transients (or spikes) can erase data from memory or even cause components to fail. To protect against these types of problems, power cables should be properly grounded and one or both of the following methods should be employed;
- Place the system on a dedicated power circuit. Do not allow the system to share a circuit with one of the following:
- Copier machines • Air Conditioners • Power Tools • Teletype machines • Any other motorized equipment
- Power Protection Devices** A variety of devices are available that protect against power problems, such as power surges, transients, and power failures. The following equipment can provide some level of protection;
- Surge Protectors • Line Conditioners • Un-interruptible Power Supply (UPS). A 1.5KWA UPS minimum recommended.
- Warning! Cable Connections** To avoid damage to the projector, power "off" the projector and disconnect the main AC line cord before you connect or disconnect the IR receiver(s) or any other peripheral.
- Ceiling Mount Precautions** In a ceiling mount application, the strength and rigidity of the ceiling are very important. The location should be carefully checked beforehand to determine that the installation will safely support the weight of the projector.
- NOTE:** *AmPro Corporation is not responsible for injury or damage caused by an improperly installed projector.*
- Lamp Module Warnings**
- Be sure the lamp and its holder are cooled before changing lamp or injury to personnel will occur.
- Caution**
- 
- Surfaces**
- The lamp is under great pressure at all times and may explode. To reduce the risk of personal injury and/or property damage, when servicing the projector lamp wear safety glasses and allow the lamp to cool completely.
 - Be careful not to touch the exposed surface of the lamp itself. This could impair lamp performance and shorten lamp life.
- Lamp Module Disposal** The lamp inside the lamp module is under pressure. Do not incinerate. Eye protection should be worn when working with the lamp to avoid injury from metal particles.
- Lens Cleaning** To avoid the risk of scratching the lens, only clean the lens if absolutely required. A small amount of dust on the lens will have very little effect on the picture quality. If the lens must be cleaned, use a dry, soft optical quality cloth. Rub very gently in a circular motion.
- General Notes**
- All safety and operating instructions should be read before the projector is operated.
 - The exterior of the projector may be kept in good condition by wiping it with a clean, dry, soft cloth.
 - For general safety, the projector should be cleaned internally only by an authorized AmPro service technician.
 - Do not place magnetic equipment on or near the projector.
 - Secure service any time the projector is damaged or fails. An obvious change in performance may also indicate a need for service.

General Notes



- Do not attempt to service the projector yourself by removing the covers.
- Doing so may expose you to dangerous voltages or other hazards. Refer servicing to qualified service personnel.
- Remove the main power plug from the wall socket when the projector has failed.
- Do not use this projector immediately after moving from a low temperature to high temperature, as this causes condensation, which may result in fire, electrical shock, or other hazards.
- When this projector is used on a cart, care should be taken to avoid quick stops, excessive force, and uneven surfaces, which may cause the projector and cart to overturn, damaging the equipment or causing possible injury to operator.

PC/ALICE Configuration

CAUTION: The ALICE projector operates with an internal PC. DO NOT make any changes to the operating system and the ALICE program without prior authorization from the factory. Failure to comply may result in warranty cancellation. Should AmPro be required to restore the projector back to its original configuration, AmPro WILL charge for labor and/or travel (shipping to-from the factory) and/or materials required to do so.

Windows® 95

Please do not lose the certificate of Authenticity number that is attached to the front of the Windows® 95 manual (Product 00000-OEM-000000-00000), because another number cannot be issued.

We CANNOT provide a replacement! This number is keyed to the Windows® 95 CD that you received with your ALICE projector and if lost would make purchasing a new copy a necessity.

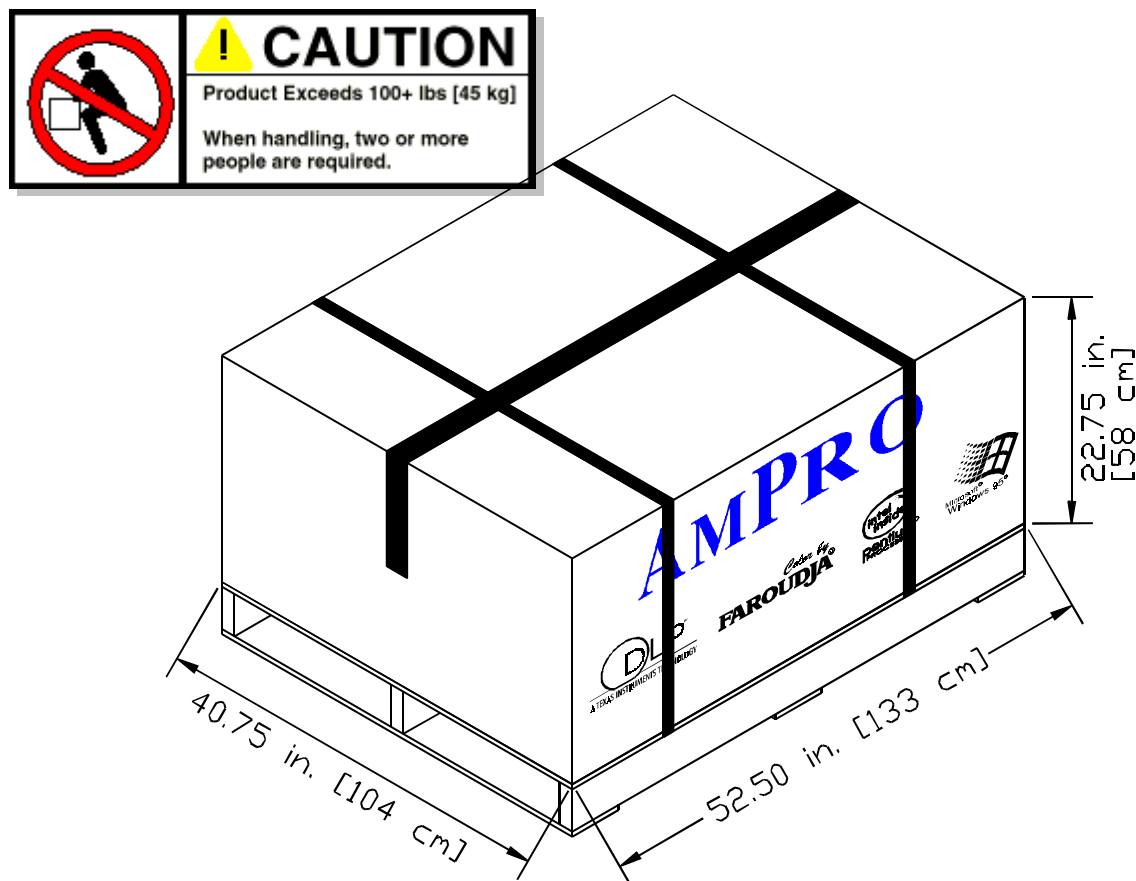
Copy Guarded Video Material

Due to the nature of the encoded process used in copy guarded video material, which is beyond the control of AmPro Corporation. It is the user's responsibility to correct for any video disturbances or artifacts caused by the copy guarded video material which may affect the projector's operation.

Un-Packing and Packing

Introduction This section of the manual describes the directions for inspecting the AmPro 5000 Series standard shipping container, contents and describes steps to follow when unpacking the projector shipping container. Additionally, reference is provided for repackaging the projector if necessary.

Description The AmPro 5000 Series is shipped in a cardboard/foam container where it is strapped to a floating platform to protect from shocks and vibrations. A skid on the bottom of the container allows access for a forklift. A hollow compartment within the main foam insert contains the accessories, (IR keyboard, remote control, lens and power cord, etc.). Upon receiving the 5000 Series projector, inspect the shipping container for any signs of visual damage. After unpacking, determine that all items ordered are present. Verify that you received the proper cables, lens(es) and documentation and there is no visual damage to the projector. If any part is damaged or missing, immediately notify the carrier and you're selling dealer or contact AmPro Customer Support personnel.



Un-Packing

- Step 1. Remove the two (2) banding straps from around the shipping container.
- Step 2. Remove the top section carton (item 1) by sliding it up and over the interior sections.
- Step 3. Remove the Plywood cover (item 2) and top foam insert (item 3).
- Step 4. Remove the Lens (item 5) and accessories (item 4) from the hollow compartments
- Step 5. Carefully slide the main foam insert (item 6) up and over the projector.
- Step 6. Loosen the top locking nut on all three level feet. See Detail A.
- Step 7. Remove the four (4) wooden lags bolts (item 9) securing the two shipping bars (item 8).
- Step 8. With the shipping bars removed, carefully lift the projector off the floating platform (item 10).
- Step 9. Remove one leveling foot at a time and remove the flat washers then, reinstall the leveling foot.
- Step 10. Install the lens by carefully rotating the lens clockwise (CW) until it is firmly attached.



When installing the lens, Do not over tighten or it will become difficult to remove.

Packing

- Step 1. Remove the lens assembly by rotating it counterclockwise (CCW). Place the lens in its' protective bag.
- Step 2. Place the projector on the floating platform (item 10).
- Step 3. Slide the two shipping bars (item 8) in place, making sure a washer is above and below the bar. Tighten the top lock nut down.
- Step 4. Slide the main foam insert (item 6) around the projector. Place lens and any accessories into the compartments and the rear of the main insert.



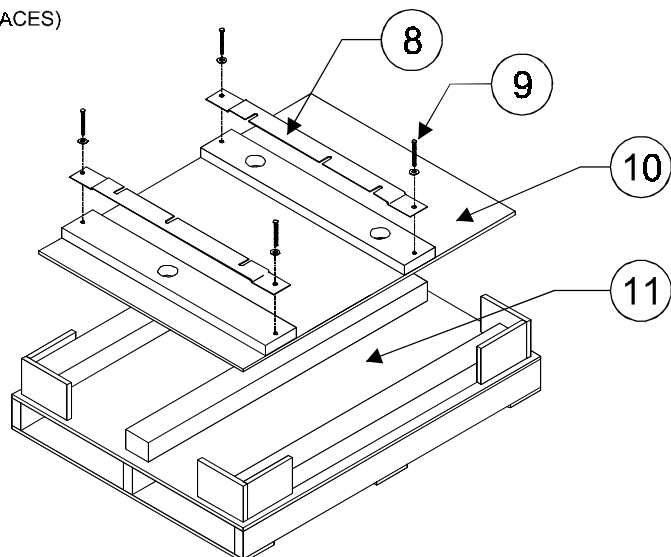
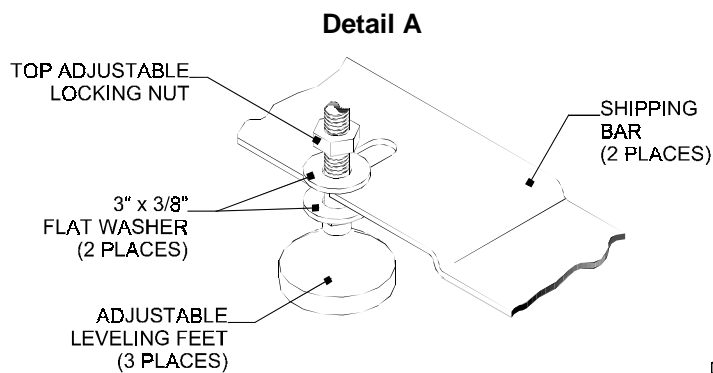
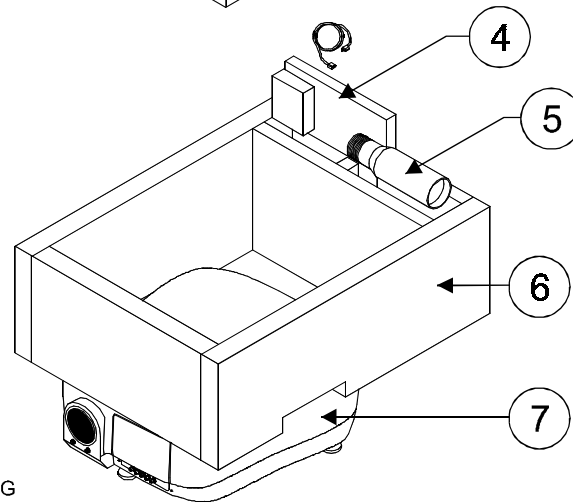
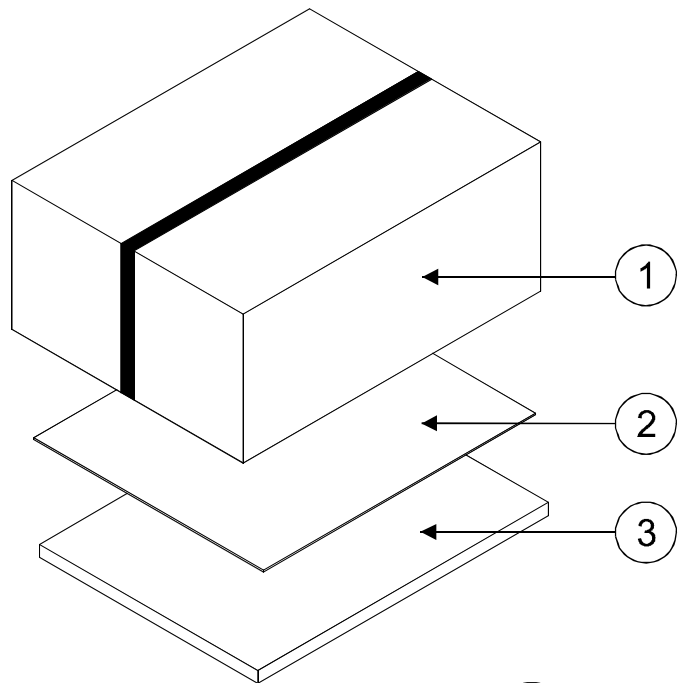
If the projector is being shipped for a service related issue, check with the service provider for what accessories are required to be shipped with the projector.

Step 5. Place the top foam cover (item 3) and plywood cover (item 2) on top of the main insert.

Step 6. Slide the outside carton over the entire assembly and secure with banding straps.

NOTE: If the projector is to be shipped back to the factory, be sure that the Return Authorization Number (RA#) is cleared marked on the container.

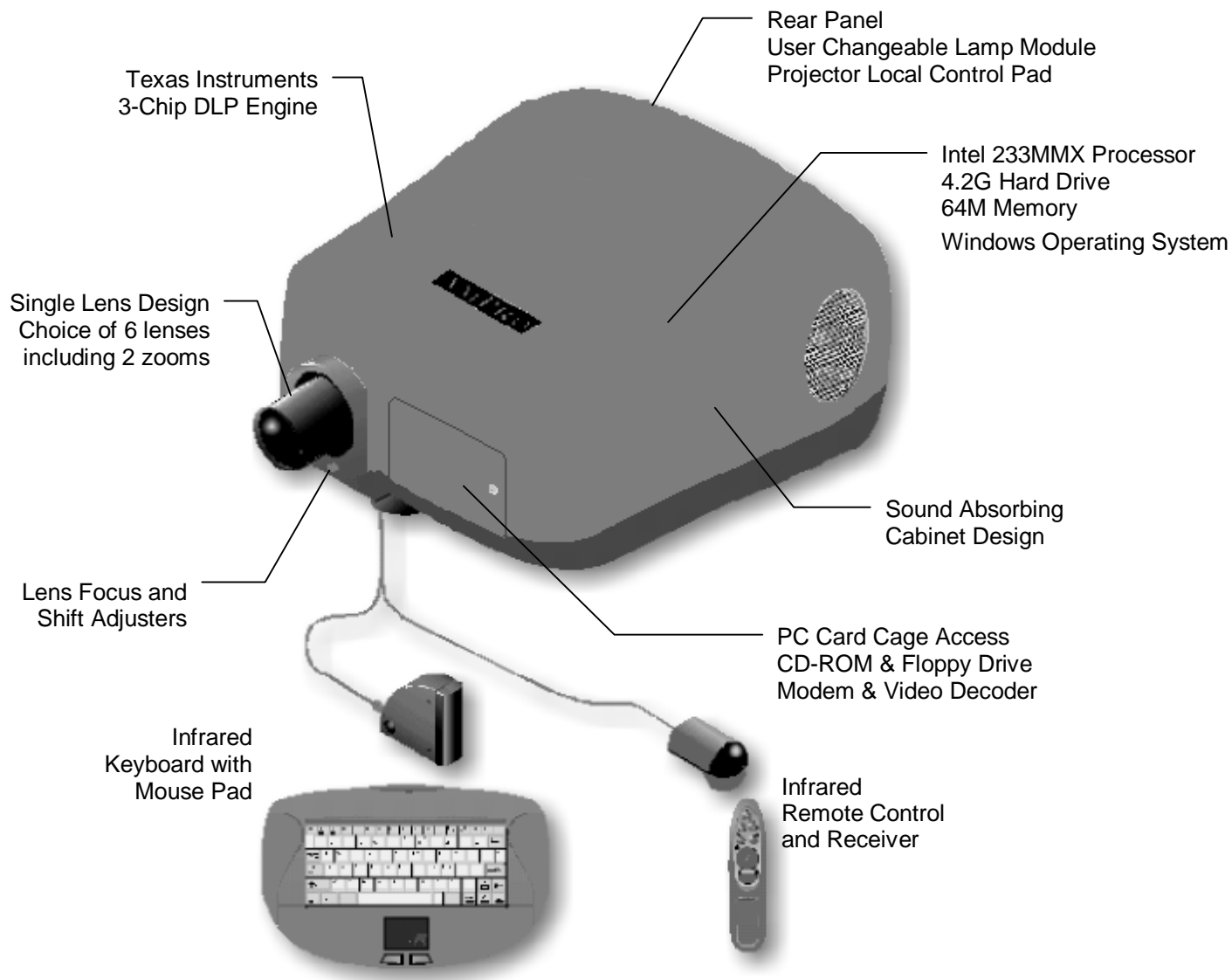
Shipping Container Contents		
Item	Description	Qty.
1	Shipping Carton	1
2	Plywood Cover	1
3	Foam Cover	1
4	Accessory Boxes	2
5	Lens	1*
6	Foam Insert (Main)	1
7	Projector	1
8	Shipping Mount	2
9	Wood Lag Bolts	4
10	Floating Platform	1
11	Skid w/Pallet	1
Ref	Optional Items	**
*Lens(es) shipped only if ordered		
** Depends on number of options selected at time of order.		



Projector Overview

General The AmPro 5200 DLP™ projector is the latest in large screen display technology. The AmPro 5200 is called "ALICE™ - Advanced Light Imaging with Computer Enhancement" which uses Texas Instruments' Digital Light Processor three-chip engine that projects a bright 1,300 ANSI lumens at a resolution of 848 x 600. With the inherent precision of TI's DLP™ 10-bit gray scale, ALICE displays true color and sharp detail in a near pixelization-free display.

Features The model 5200 MX includes a Intel Pentium 233MMX processor, 4.2G hard drive, 32M of memory, 12X (or greater) CD-ROM, modem, and audio control card.

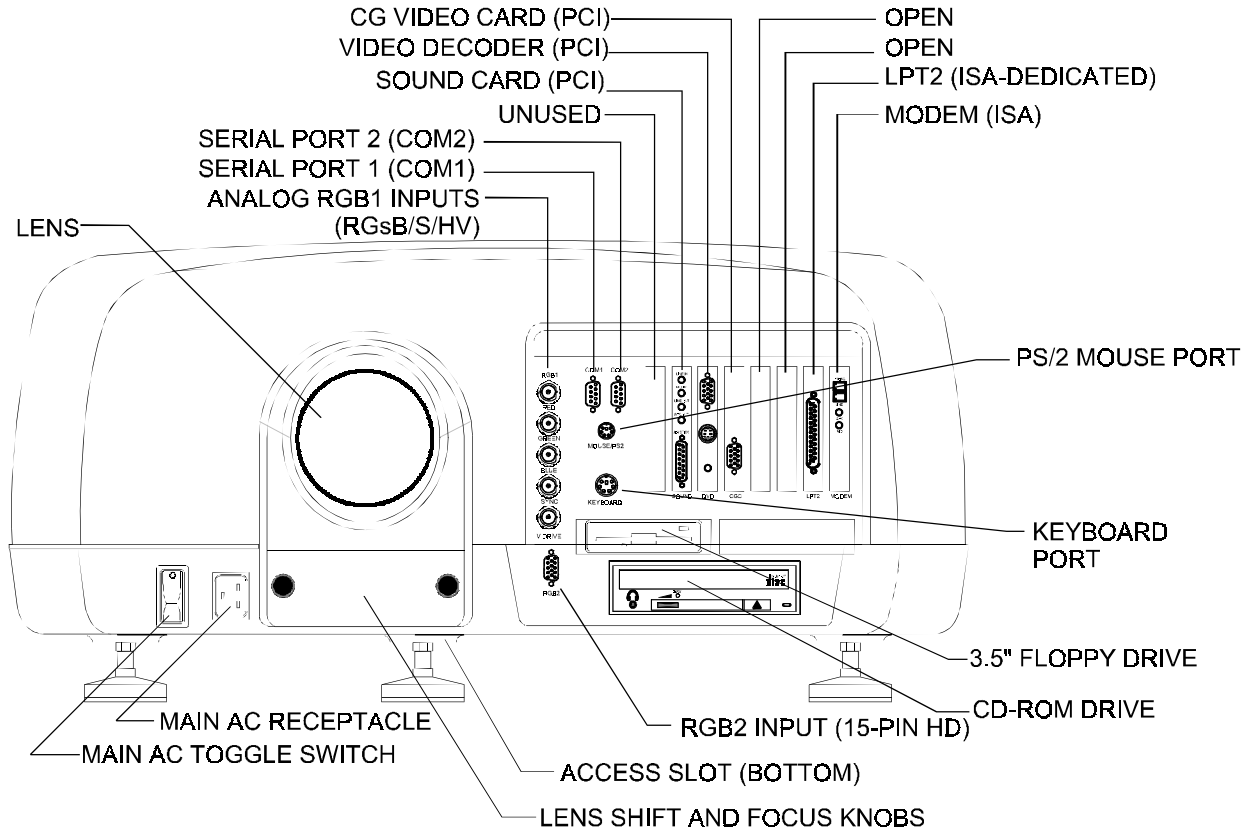


Projector Overview

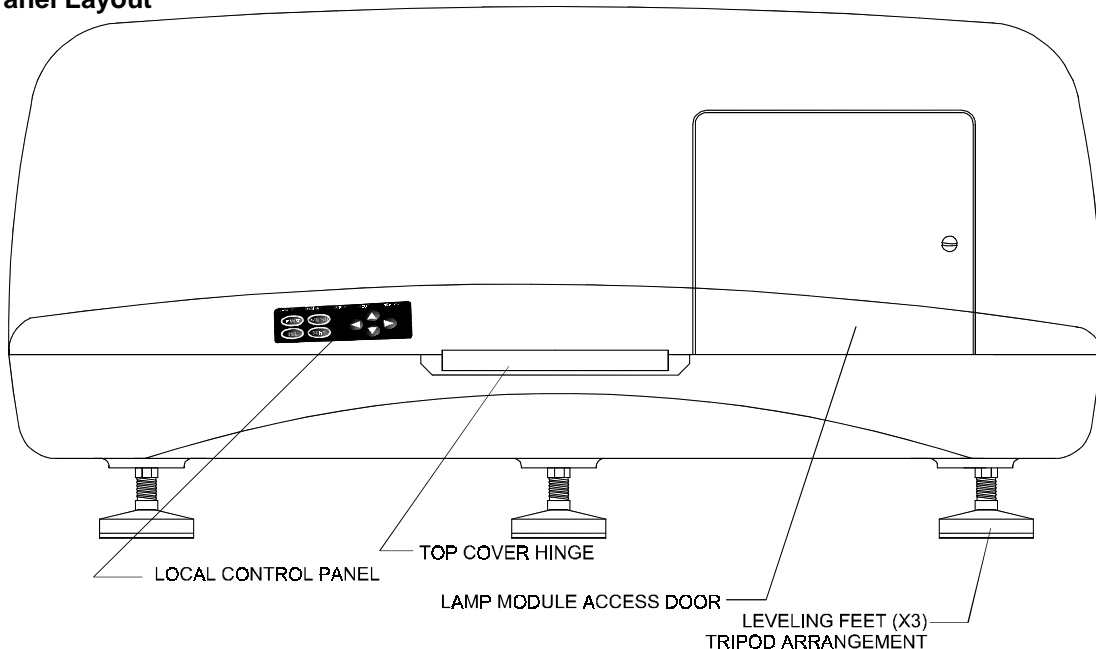
Front Panel Layout

All external connections and the PC Card Cage are located at the front of the projector. The main AC power receptacle, the main AC toggle/breaker switch and all the different video inputs are readily available.

Open the front access panel to gain entry to the PC card cage and connectors. To access the PC card cage and connectors, turn the ¼ turn captive screw located on the left side of the access panel, and gently open the door.



Rear Panel Layout

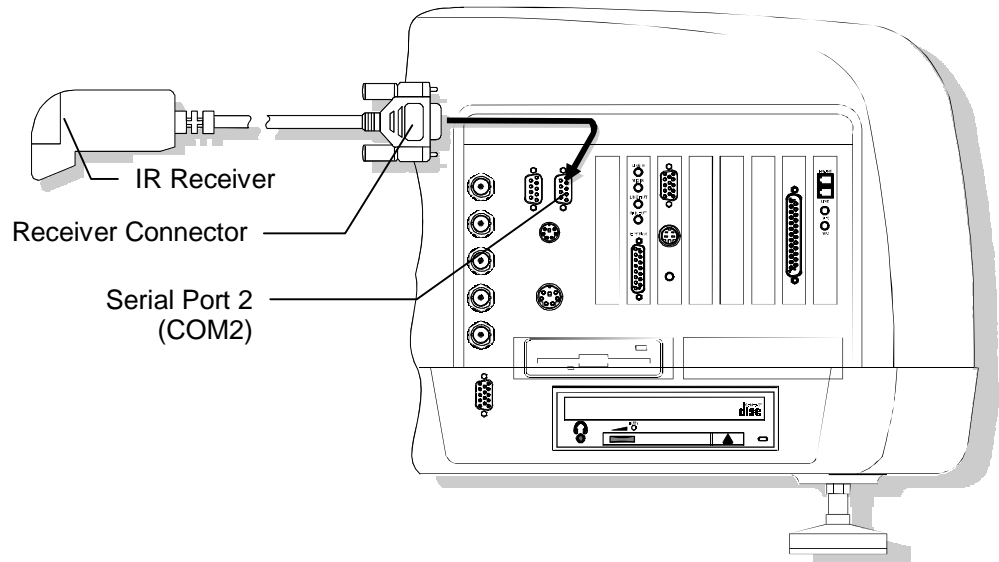


Remote Control Installation and Operation

Connecting the Receiver

The external serial receiver lets you control your mouse from up to 45 feet away. To connect the Mind Path external receiver to your computer follow these steps:

- Turn off your projector.
- Plug the free end of the external serial receiver cable into a serial port 2 (COM2) on your projector.
- Turn on your projector.



Positioning the Receiver

Once the receiver is connected to your projector, take care to place it so the remote's infrared signal can reach it. There are two ways to do this. The best way to position the receiver is so that the infrared signal travels directly from the remote into the receiver. As you use the remote, aim at the red light on the receiver. If your presentation room's configuration prevents positioning the receiver this way, position the receiver so the infrared signal bounces off a projection screen or wall. Depending on the distances involved and the reflective qualities of the screen or wall, bouncing the infrared signal off a screen or wall may perform just as well.

Installing the Batteries

The remote uses 2 AAA alkaline batteries.

To install the batteries, follow these steps:

- Turn the remote upside down with its back facing you.
- Using your thumb, gently press and slide the battery cover up until the battery compartment is exposed.
- Insert the batteries into the battery compartment.
- Slide the battery cover back into position until it snaps into place.

NOTE: Although your batteries should last up to 1 year of normal operation, we recommend you purchase a second set of batteries and carry them with you as a back up. Always use alkaline-type batteries in your remote.

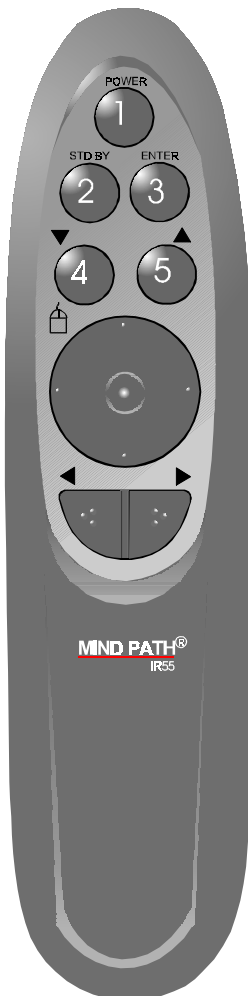
Software Notice



Your 5200 IR remote Control includes specially configured operating software.

DO NOT remove or edit this software, unless advised and instructed to by the factory. Failure to comply will result in detrimental operation of the remote and projector.

Remote Control Functions

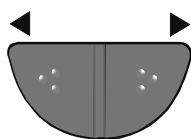


- ❶ - Power On, 2nd Function; Toggle between Sources
- ❷ - Standby; toggle the projected image on/off (Video Mute)
- ❸ - Display Main Menu, Enter highlighted function
- ❹ - Cycle through control; Use to scroll “left” through controls
- ❺ - Cycle through controls; Use to scroll “right” through controls.

Mouse Pad – Move the mouse cursor, Enter function

	Press Edge	Cursor Moves
	Click Center	Left Click
	Click Center Twice	Left Double Click
	Press and Hold Center (1 sec.)	Left Click-and-Drag

Adjustment Pad – Use to increase/decrease selected function



When a slider control is visible or whenever an adjustment is required, use the adjustment pad to increase or decrease the setting

Until a slider control is visible, the adjustment pad may be used to scroll left and right through the functions.

Within a “List Box”, use the adjustment pad to move between the options.

Keyboard Installation and Operation



Installing the Batteries

- Turn the keyboard over onto its face.
- By pressing the two latch tabs simultaneously, pry open the battery door with your fingers.
- Insert 4 AA alkaline batteries with the positive (+) and negative (-) orientation as shown inside the compartment (negative is at the flat end of the battery and goes towards the spring).
- Replace the batteries door and make sure both latch tabs snap into place.
- Turn the projector off.
- Open the front access panel.
- Locate the mouse and keyboard ports.

Connecting the Keyboard

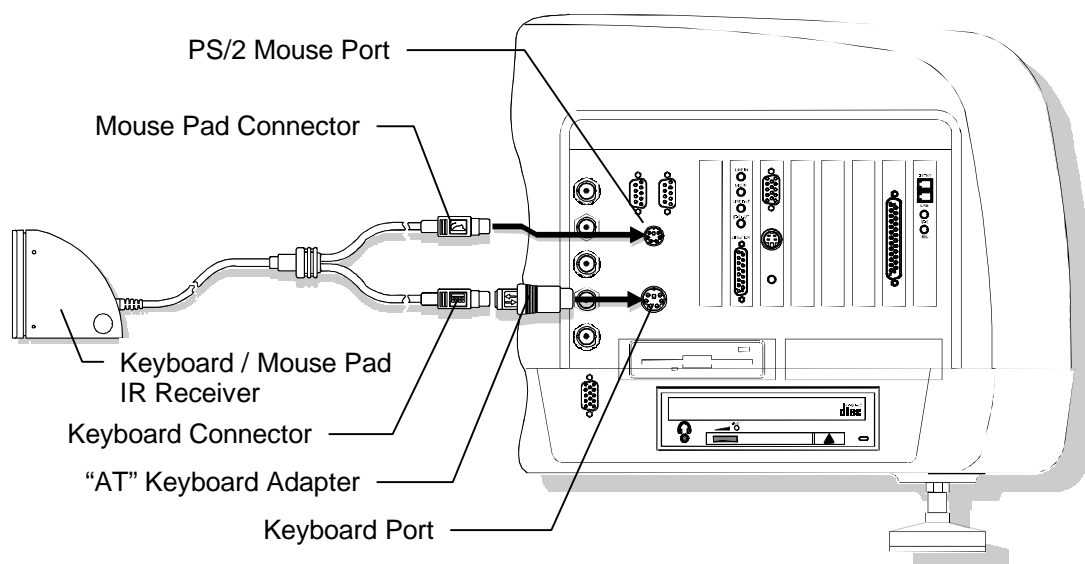
Mouse Connection

- Identify the mouse connector of the “Y” adapter.
- Connect the 6-pin round din connector to the mouse port on the projector

Keyboard Connection

- Identify the keyboard connector of the “Y” adapter. The one marked with a keyboard symbol.
- Plug the connector into the port-labeled keyboard on your projector.

Once all connections are made (IR Remote and Keyboard), power the projector on.



The keyboard and mouse cables on the receiver have very similar connections. Take care not to mix them up. No damage will result, but your keyboard and mouse pad will not work properly.

Positioning the Receiver

The receiver is multi-positional. It can stand up or lay flat on either side. If you are placing it on a table or desktop. It is best to stand the receiver up to minimize any disruption of the signal by the table or desktop.

When you are mounting or positioning the receiver be careful not to block the lens from line-of-sight contact with the Keyboard. The Keyboard is powerful enough to bounce the infrared (IR) signal off the walls, but obstructions close to the receiver may interfere.

Keyboard Range

Indoors, in the absence of IR light sources, operating ranges will be up to 50 feet (15.2 meters), and, under ideal conditions, beyond. Naturally, individual results will vary depending on how you use your keyboard.

Battery Life

Both the keyboard and mouse pad use what is known as "sleep mode". When nothing is being typed on the keyboard, the IR LED's and the keyboard processor go to "sleep," consuming a mere fraction of their normal power requirements, while waiting for the next key press.

Under normal usage, several pages per day, battery life of up to a year will be typical. Again, your results will depend on how you use your keyboard.

When it finally comes time for battery replacement, you will begin to notice a reduction in range, typified by lost keys at longer distances. Please use only alkaline batteries only.

Keyboard Specifications	
Technology	Broad Beam Infrared
Number of Keys	79 (equal to 104 when combined with the Fn Key)
IR Carrier Frequency	36 KHz
Effective Operating Range	Up to 50 feet (15 meters) typical
Effective Operating Angle	Horizontal: $\pm 60^\circ$ at 5 meters
	Vertical: $\pm 30^\circ$ at 5 meters
Battery Life	Up to one year (typical)
Power	4 x AA alkaline batteries (6 VDC)
Temperature	Operating: 5 °F (10 °C) to 132 °F (55 °C)
	Storage: -12 °F (-25 °C) to 158 °F (70 °C)
Keyboard Dimensions	13.8" (35 cm) x 8.5" (22 cm) x 1.6" (4 cm)
Keyboard Weight	1 lb., 9 oz (0.7 kg)
Receiver Dimensions	2.8" (7 cm) x 2.7" (7 cm) x .0.9" (2.3 cm)
Keyboard Connector	6-pin PS/2 mini-DIN
Mouse Connector	6-pin PS/2 mini-DIN

Keyboard Operation The IR remote Control keystrokes can be simulated using the IR Keyboard. The following is a list of projector commands using the Keyboard.

NOTE: The IR Remote Control key equivalent is represented in parenthesis ()

Keystrokes

Description



POWER (Ⓢ): Press <Ctrl> <Alt> <P> keys simultaneously to power the display engine “on”.

2nd Function: Use <Ctrl> <Alt> <P> to toggle between available sources.



POWER OFF: Use the <Ctrl> <Alt> <Q> key sequences to explicitly power-off the display.



STANDBY: (Ⓢ): Press <Ctrl> <Alt> <S> keys simultaneously to toggle the projected image On/Off (Video Mute command).



DISPLAY OSD MENU: (Ⓢ): Use the <Enter> key to initially display the on-screen-display (Main Menu)

SELECT: After scrolling through the menu commands, press <Enter> to select the highlighted function for activation or additional options.

SCROLL: If a command employs an active list window, use the <Enter> key to scroll through the options.



SCROLLING: Use the keyboard arrow keys to scroll between options listed in secondary windows and boxes. When an adjustment meter is employed, use the arrow keys to perform the desired adjustment.

<Fn> FUNCTION: In addition, use the <Fn> key to enable the keystroke function denoted within the boxed area, i.e., When a window is present that uses the scroll bars, pressing <Fn><Home> will jump to the beginning of the list. Likewise, pressing <Fn><End> will jump to the end of the list.

ADJUSTMENT: Certain functions use the keyboard arrow keys to increase and decrease the active function levels. Again, the <Fn><Home>/<End> keys work similar as described above.

The following keyboard commands are used to select a particular channel or source without the use of the on-screen menus.



CHANNEL SELECT: The <Ctrl><Alt><C> command allows the user to enter the “waiting for channel selection.” After entering the initial command, the user enters<Ctrl><Alt>, then selects a desired channel number between 1 and 9.



SOURCE SELECT: Entering <Ctrl><Alt><U> places the projector into the “waiting for source command.” After the initial command. The user enters <Ctrl><Alt>, then the desired source number, see below

- <1> = RGB1
- <2> = RGB2
- <3> = Video
- <4> = S-Video
- <5> = Internal

Local Control and Indicators



Controls Located at the rear of the projector is the local control panel. The controls allow the user to perform the following functions.

- PWR (POWER): Allows the user to power the projector on and off.
- MENU: Enters the On-Screen-Display Mode.
- SEL (SELECT): Use the SEL key to select the highlighted function.
- STBY (STANDBY): Use to toggle the projected image on or off.
- ARROW KEYS: Use to scroll through menu items. Once an item has been selected, use the arrow keys to adjust the selected function.

Indicators External L.E.D. Indicators: Located at the rear of the projector (just above the local control panel) are five L.E.D.s These L.E.D.s will indicate the status of the projector through the boot sequence and operation.

- LAMP: This L.E.D. indicates the lamp power supply is on and the lamp should be lit.
 - Green-normally "ON".
- ENGINE: Indicates the display engine is turned "on" and operational.
 - Green-normally "ON".
- LVPS: Indicates main AC is applied, switch is "on" and the P.C. power supply is operational.
 - Green-normally "ON"
- HDD: Hard-disk drive. Lights up or flashes when the drive is in use or active.
 - Red-normally "FLASHES"
- READY: Initially this indicator blinks, indicating the PC. is in the boot cycle. When the P.C. has completed the boot cycle, the L.E.D. will become steady and the projector is ready for the power-on command from the remote control or keyboard.
 - Amber- Initially "BLINKS", then "STEADY".

Source Connections

Essential Cable Connections

Before applying AC power to the 5000 Series projector, both IR receivers **MUST BE CONNECTED**.

- The IR receiver connections for the keyboard and remote control are located on the PC card cage.
- To access the PC card cage and connectors, turn the ¼ turn captive screw located on the left side of the access panel, and gently open the door.
- Route the connectors from the IR receivers up through the access slot located on the underside of the projector.



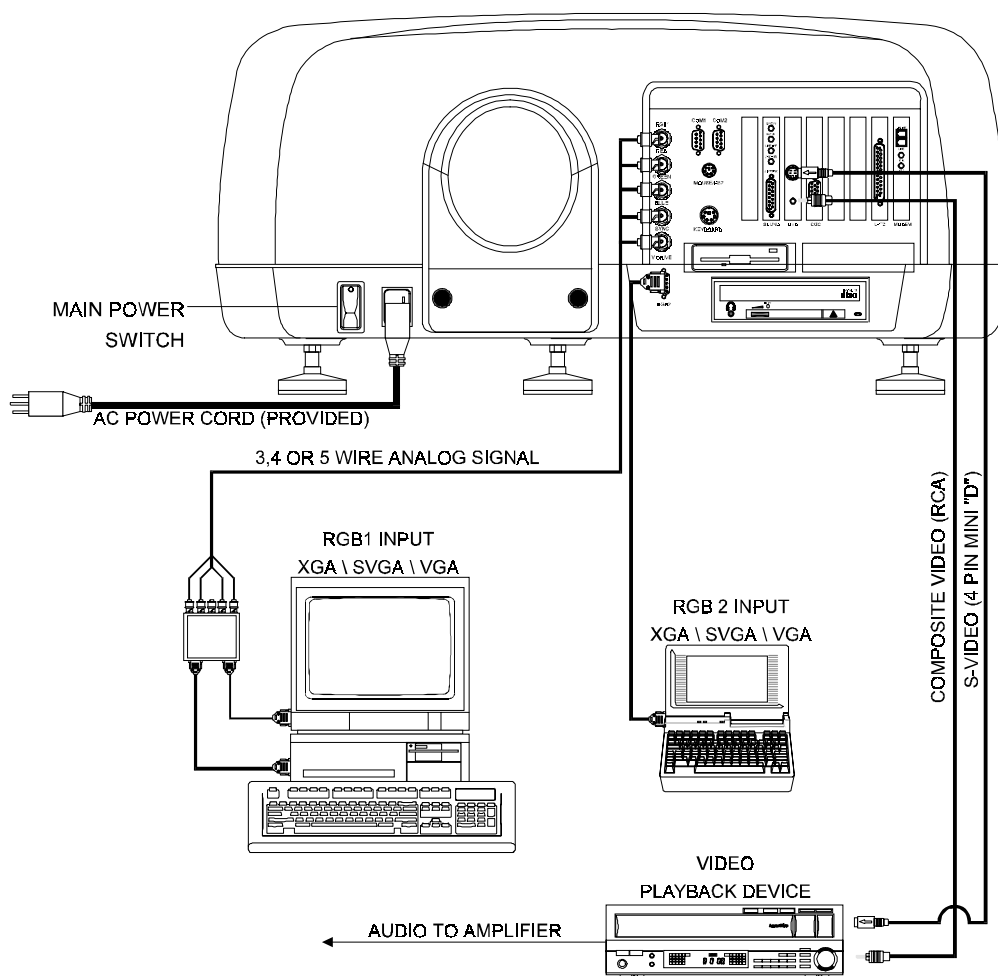
Refer to the Remote Control and Keyboard Installation section for information on connecting the IR Remote and Keyboard.

Source Connection

The AmPro 5200 DLP™ projector incorporates “Auto-Search” and “Auto-Setup”. This simply means that the projector will automatically look and setup to new sources.

“ALICE’s” operation is based on a powerful PC operating system, which incorporates an internal graphics card, so no external source is required. If no external source is detected, ALICE will automatically switch to the internal source, providing that Auto-Search is enabled. Refer to Basic Operation Section for additional information.

However, if an external source is desired, follow the diagram below for connecting the source. Remember that ALICE will automatically select the source for you.



Basic Operation and Menu Navigation

Power Up The AmPro 5200 Series follows an initial “power-up” sequence from the time the main AC is toggled “on” to the time an image is displayed.

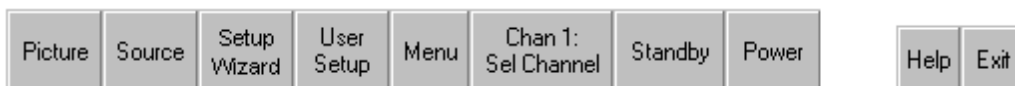
- With the two receivers installed, plug the main power cord into a receptacle.
- Toggle the main ac switch “on”. The projector will automatically start, first displaying the Windows boot-up screen, then the Scan Disk operation.
- The projector will then automatically search for an external source, if present, the projector will perform an auto-setup, then display the source. If no source is present, the projector will automatically switch to the internal graphic channel.

NOTE: If more than one external source is present, the projector will switch to the “last source” selected prior to the last shutdown.

Lens Focus / Shift / Zoom There are two knobs located directly below the lens assembly. The knob on the left (as viewed from the front, table mounted) is used to perform the lens shift, while the second knob is used for lens focus. Adjust the Shift/Focus knobs for optimal picture performance. If your projector is equipped with a zoom lens, adjust the image size using the gray ring around the lens.



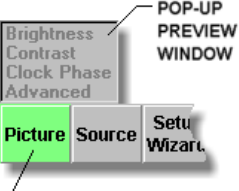





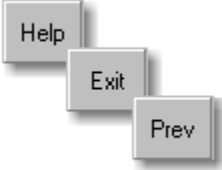


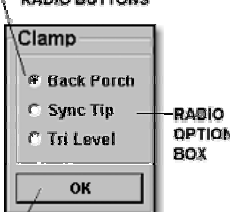
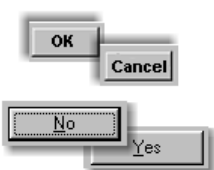


On-Screen Menus The AmPro 5200 uses a series of overlay menus to control the operation of the projector. Meaning, whatever source is currently being displayed, the control menu and commands are overlaid on top of it. This technique allows the user to utilize the controls of the projector and make desired changes while the active source is being used.

- To bring-up the main menu, press **3** on the remote control or <Enter> on the keyboard. Below illustrates and briefly explains the main command set options.



- **Picture** – Allows the user to adjust image quality functions such as, brightness, contrast, clock phase and some advance settings as well.
- **Source** – Allows the user to explicitly select the display source type. I.E., RGB, RGB2, VIDEO etc.
- **Setup Wizard** – The Setup Wizard allows the user to step through predetermine setup sequence. This is useful for the first time user.
- **User Menu**– This function allows you to perform a random type of channel setup or editing. Experience operators typically use this function.
- **Menu** – Menu presents additional commands and functions for the setup of a source (channel).
- **Chan 1: Sel Channel** – This button displays the currently active channel. Once selected, a channel list dialog box is presented for manual selection of a desired channel setup.
- **Standby** – Puts the projector into the standby mode. Powers the lamp supply off. Press the center of the Mouse Pad (remote) or <Enter> (keyboard) to redisplay the image. Also, see Remote Control operation.
- **Power** – Powers the projector (Display engine/Lamp) OFF. Presents the user with a decision dialog box. In the event this command was entered intentionally, simply select NO on dialog box.
- **Help** – Enters the internal WinHelp help file.
- **Exit** - Exits the menu system and removes the menu(s) from the screen.

Menu Navigation and Conventions

<p>Command Buttons – Command buttons cause an action to occur, such as selecting a particular function or presenting a supplementary dialog box</p>	 <p>TYPICAL COMMAND BUTTONS</p>	<p>List Box – Allows you to select an item from a list. Scroll bar - Use the scroll bar typical associated with list boxes to move up and down the list. An item that is highlighted is available for selection.</p>	 <p>SCROLL BAR HIGHLIGHTED ITEM COMMAND BUTTON</p>
<p>Pop-Up Preview Windows – Pop-Up preview windows are associated with some command buttons. The preview window allows you to view the perspective controls and functions relevant to the initial command.</p>	 <p>POP-UP PREVIEW WINDOW ACTIVE COMMAND (HIGHLIGHTED)</p>	<p>Text Entry – With certain operations a text entry is required. One example of this function is the Channel® "SAVE AS". Place the cursor into the text entry window and use the keyboard to type or edit the existing text string.</p>	 <p>SCROLL BAR TEXT ENTRY WINDOW</p>
<p>Pop-Up Active List Window – Pop-up Active list windows allows the user to select a function directly from the smaller pop-up window. Typically, when scrolling through the pop-up window, the function is simultaneously highlighted and activated</p>	 <p>POP-UP ACTIVE LIST WINDOW ACTIVE COMMAND (HIGHLIGHTED)</p>	<p>Pop-Up Functions with Slider Controls – Use the  button or <Tab> key to move between function level box and commands. When the relevant function level box is highlighted, use the remote adjustment pad or keyboard arrow keys to adjust.</p>	 <p>Slider Control Function Level Box</p>
<p>Meter Window/ Bar – The meter bar is made available to those functions that require an adjustment be made.</p> <p>Use either the Adjustment Pad (remote) or the arrow keys (keyboard) to perform the adjustment.</p> <p>Additionally, use the remote mouse point and click to drag the slider.</p>	 <p>METER BAR WITH SLIDER</p>	<p>Help - Enters this help file. This command is made available on all menu screens.</p> <p>Prev – Previous command. This command is used to revert back to preceding command bar.</p> <p>Exit – Available on all screens. Allows you to exit the menu system and removes the on-screen display.</p>	
<p>Radio Buttons – Used to present two or more mutually exclusive choices. You must pick on of the choices by either mouse clicking or using the remote control or keyboard arrow keys to select the associated button to highlight.</p> <p>Use the  button or <Tab> key to move between option box and command. Use  buttons to move between options</p>	 <p>RADIO BUTTONS RADIO OPTION BOX COMMAND BUTTON</p>	<p>OK Button– Click this button to enter your choice and return to the initial command.</p> <p>Cancel Button - The majority of the windows include the Cancel button. Click this button to cause ALICE to ignore any changes you've made to the function and return to the previous operation</p> <p>Yes/No Buttons – These commands are normally associated with decision windows. Yes will accept the command and No will cancel command.</p>	
<p>Check Boxes – Enable/disable a particular command option, select multiply choice items. The option is enabled when a check <input checked="" type="checkbox"/> appears in the check box. The item is disabled when the check box is empty.</p>	 <p>CHECK BOX COMMAND BUTTON</p>	<p>Close Window and Exit Button – On some of the menus you will find the Close/Exit button, these controls are typical associated with information only windows</p>	 <p>CLOSE WINDOW/EXIT BUTTON</p>

Auto Search & Temp Channel

Auto Search When a new source is introduced to the projector, the projector will initially search through the “**user**” channel listing for a match. If a match is found, this channel is selected and the channel number is displayed in the “Chan n, Select Channel” command button located on the initial menu.

If no match is found in the “**user**” channel listings, then auto-search will look through the “**factory**” read-only channel data for a match. If a match is found, then this is selected and the channel number displayed in the “Chan n, Select Channel command button is set to 0 (zero).

If no match is found in the factory channel listing, then the projector will interpolate between the next closest signal above and below the current signal and establish a **temporary** channel. Again, displaying 0 (zero) as the selected channel number.

- **User Channel List**

The “**user**” channel list contains all user established channels setups and some common source setups from the factory.

- **Factory Channel List**

The “**factory**” channel list is a read-only listing that is originally created at the factory and cannot be accessed directly by the user. This list contains a variety (100+) of common video and computer setups.

- **Temporary Channel**

A temporary channel is denoted as a channel that has either been copied from the factory channel list or a new channel created by system interpolation. A temp channel is designated as Channel 0 (zero).

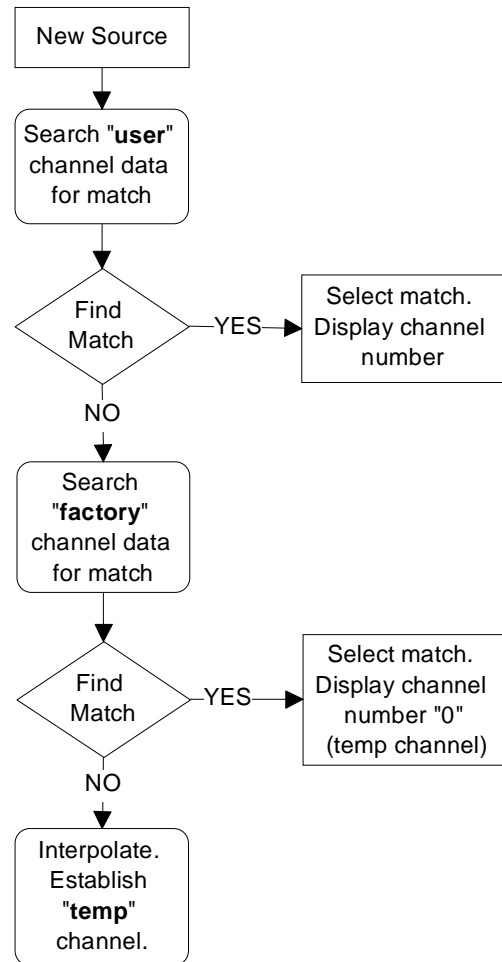
Saving Temporary Channels

The temporary channel is never changed unless the user has changed at least one parameter, i.e., Brightness, Contrast, H Pos etc.

Now assuming that at least one parameter has been changed, the temporary channel is saved under either of the two following two circumstances;

- At least 10 minutes has passed since the most recent change. This 10-minute timer is reset every time a parameter change is made. If the temporary channel is saved under this condition, a new channel is created and the projector is switched to this new channel. The new channel is set to the next open channel number and is tagged with the horizontal and vertical frequencies.
- A temporary channel is saved if any action is taken that causes a new or different channel to be selected. This includes such actions as selecting a new channel manually, selecting a new source manually, changing the input source so auto search forces a channel change, selecting this Help or Edit Config, which both forces selection of the internal channel.

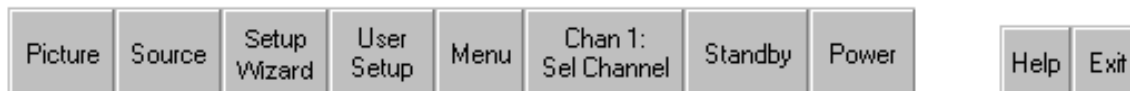
Auto Search Flow



Menu System

As previously mentioned, ALICE operates on layers of command button menus. The initial command buttons (below) allows you to access all of the user type projector controls.

Main Menu



Picture Allows the user to adjust image quality functions such as, brightness, and contrast, clock phase and some advance settings as well.

Source Allows the user to explicitly select the display source type. I.E., RGB, RGB2, VIDEO etc.

Setup Wizard The Setup Wizard allows the user to step through predetermine setup sequence. This is useful for the first time user.

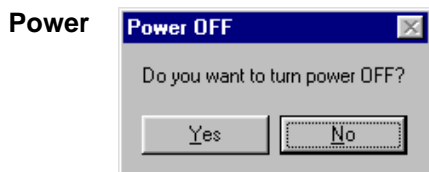
User Setup This function allows you to perform a random type of channel setup or editing. This is typically used by experience operators

Menu Menu presents additional commands and functions for the setup of a source (channel).

Chan 1: Sel Channel This button displays the currently active channel. Once selected, a channel list dialog box is presented for manual selection of a desired channel setup.

In the case of **Chan 0**: Chan 0 indicates that the projector did not find a match for the incoming signal and has either selected a setup from the “factory channel data” which is a read-only list or has interpolated between the existing channels and has established a temporary channel. See Auto-Search for operation and saving temporary channels.

Standby Puts the projector into the standby mode. Powers the lamp supply off. If you are using an external monitor for projector operation, press STANDBY to re-display the image. Also, see Remote Control operation.



Powers the projector (Display engine/Lamp) OFF. Presents the user with a decision dialog box. In the event this command was entered intentionally, simply select NO on dialog box.



Important: It is recommended to leave the main AC power applied and the main AC switch be left in the “on” position. If the main AC power is to be removed, allow a minimum of 2 minutes after engine shutdown before removing AC.

Help Enters this help file.

Exit Exits the menu system and removes the menu(s) from the screen.

Menu System



Picture Command - The user is provided with a new set of command controls. The numbers of controls are depended on the particular mode, i.e. RGB versus Video. These controls are used to adjust the image quality of the projected image, with additional advance controls for black level, gain, filter, odd/even setting and blanking.

RGB MODE



VIDEO MODE



Bright Adjust the brightness level until the black portions of the projected image are black, but details in the shaded areas are not lost. Selection calls out the Meter/Slider adjuster.

Contrast Contrast will change the amount of intensity. Adjust contrast for the desired results. Selection calls out the Meter/Slider adjuster.

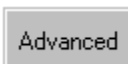
Clock Phase Adjust the timing of the pixels from the computer to match the timing of the pixels on the projector. Proper adjustment will give sharper vertical lines by using one pixel on the projector for single pixels coming from the computer. Selection calls out the Meter/Slider adjuster.

Color
(Video Only) The color function controls the color saturation of the image. If the image appears too pale or weak, increase the color level. If the color image appears flushed or too brilliant, decrease the color level. This selections calls out the Meter/Slider adjuster.

Tint
(Video Only) The tint control function controls the hue of the video image. If facial tones or objects appear too green, increase the tint setting. If facial tones appear too purple, decrease the tint level. This selections calls out the Meter/Slider adjuster.

Detail
(Video Only) The detail function controls the sharpness of the video image. If the image appears too soft, increase the detail level. If the image appears too grainy, decrease the detail level. The desired setting of the detail function, set detail as high as possible without the image appearing grainy. This selections calls out the Meter/Slider adjuster.

Advanced Evokes an additional function button bar. Under the Advance command the following functions are available:



Black



Use the Black Level Control Panel to individually adjust the amount of background brightness until the desired effect is achieved.

Gain



Use the Gain Control Panel to adjust the amount of image intensity for the individual colors. Use the MASTER to adjust the amount of overall gain.

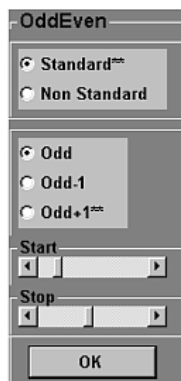
Filter



This function is utilized to pre-filter the incoming signal. Primarily used when the incoming signal is greater than the native resolution of 1024 x 768 and system level image scaling is required. When the incoming RGB video signal resolution is greater than the native resolution, Select ☒ Graphic mode and set the frequency for best overall visual performance. Although typically set to ☒ None, the Video filter may be used to clean up a noisy incoming signal. Select the desired option from within the option dialog box presented.

Advanced “continued”

Odd/Even



Certain signals may require you to set the ODD/EVEN parameters. Once selected, you are presented with an option box for selection. If your image appears jagged or the fields are offset or seem out of order, switch between STANDARD or NON-STANDARD mode. The setting of the ODD, ODD PLUS 1 and ODD MINUS 1 is only available when NON-STANDARD mode is selected. Primarily used for interlaced sources.

- The START parameter is used to set the low end of the detection range, which is typically set to 25% of image resolution.
- While the STOP parameter is used to set the high end of the detection range, and is automatically set to 75% of the image resolution.
- For non-interlaced the START/STOP command is ignored

Blanking



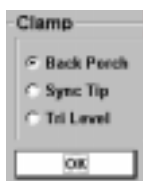
The 5200 provides the ability to blank out the image on all four sides. The purpose of the blank control is to remove any unwanted or useless information at the top, bottom, left and right sides. Once Blanking button is highlighted, a pop-up active list window appears.

Color Temperature



The 5200 provides the ability to select between 4 standard color temperatures. The pop-up option box includes the following color temperatures; 3200, 5600, 6500 and 9200° K.

Clamp



Select the required black level clamp point. Select between “Back porch” (typically associated with Video or RGB 3-wire) or “Sync tip” (typically associated with RGB 4/5-wire) or “Tri-Level” (typically associated with HDTV) mode of operation on a channel-to-channel basis. See Clamp pop-up option box.

Gamma

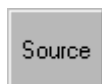


Traditionally, Gamma correction is used to compensate for the non-linear response of Cathode Ray Tubes (CRT's). Since the 5200 projector incorporates the DLP technology, where the DMD's have a linear response, the Gamma signal that is used in standard broadcast signals must be removed. There are 4 different settings in the pop-up option box for the Gamma removal. Select the best option for optimum low end or black level.

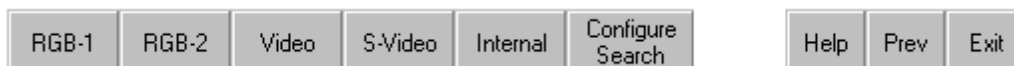
Mode



There are three (3) modes or processing choices for selection through the pop-up option box. The Video mode uses the built-in *Motion Adaptive Progressive Scan* (MAPS) conversation, The *Interlaced Graphics* mode applies Filed Jam and the *Graphics* mode uses neither the MAPS or Field Jam correction method.



Source Command - Is used to select the desired input or display mode. With all available options installed, the user may select between two (2) RGB modes, two (2) Video modes and the internal graphics mode.



RGB-1 The RGB-1 input includes separate connectors for RED, GREEN, BLUE video signals, plus separate connectors for Composite Sync (Horizontal Drive in the case of five (5) wire inputs) and Vertical Drive.

The Analog RGB input falls into three major categories, three-wire with sync-on-green, four-wire with composite sync and five-wire with separate horizontal and vertical drives. The AmPro 5200 will automatically configure itself properly for any of the above conditions, including sync input and polarity.

RGB-2 An HD15-pin connector is provided for direct connection to a VGA/SVGA and XGA from an external PC.

Video
(optional) The Video input is provided through either the internal Faroudja Decoder or the internal AmPro quad video decoder. The AmPro quad decoder will automatically works with Composite NTSC, NTSC 4.43, PAL or SECAM.

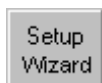
S-Video
(optional) A secondary input to either the above mentioned decoders is the S-Video input. This input uses a 4-pin mini Din connector, which is standard for this input.

Internal Refers to the internal graphics card and Windows 95® operation. When no external source is available or required, switch to the internal mode of operation

Configure Search The configure search command enables a check box dialog window (left) where you have the option of selecting which source the projector will search if no signal is applied or a lost of signal occurs.



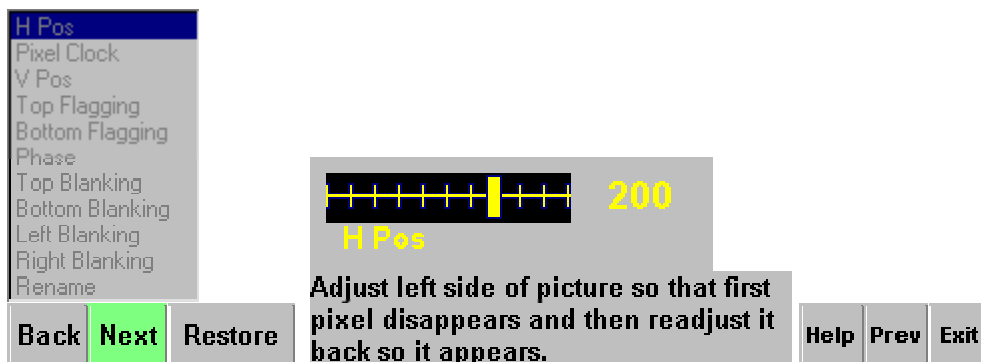
Setup Wizard



The SETUP WIZARD will guide the first time user through a step-by-step setup of the various image parameters or even if you are an experience user, the Setup Wizard provides a quick method of setting up a new source.

Main Screen and Functions

The Setup wizard screen provides you with the function list. Use the Back/Next buttons to move through the list. The Setup Wizard screen also provides the adjust meter along with brief function instructions. The restore button resets the currently active function.



H Pos

Centers the active video area within maximum display area. Adjust for minimal image loss from side-to-side. Set the start point of the image on the left side. Adjust until the left edge of the image is just visible, but not cutoff.

Pixel Clock (N)

Reduces or eliminates vertical banding and focus problems by adjusting the length of each horizontal line to match the computer line length. Adjust until the right side of the image matches the display size or is not cut off by the border.

V Pos

Centers the active video area within maximum display area. Adjust for minimal image loss from top-to-bottom.

Top Flagging

Reduces the image flagging, tearing or jittering at the top of the image.

Bottom Flagging

Reduces the image flagging, tearing or jittering at the bottom of the image.

Blanking

TOP, BOTTOM, LEFT, RIGHT - Use the blanking functions in case of wanted (active) video information is cutoff or to eliminate any unwanted (non-active) video information. Use the blanking function for the top, bottom, left and right until the desired effect is achieved.

Rename

Once all parameters have been made and satisfied, use the RENAME function to name your source. Use the <TAB> or 4/5 buttons until the text window is highlighted. Use the keyboard to enter a new source name. Using the keyboard, enter the desired channel name or press [Select] to accept the default name. Will overwrite existing channel name



Restore

Use this function to undo the last changes prior to the last save. See Note below



NOTE: Channel data is saved when one of the following conditions occurs;

- 1.) 10-minutes after a change has been made, providing no other changes are made within the 10-minute save window.
- 2.) A new channel has been selected, or an action occurs which selects a new channel or source
- 3.) An explicit "Save As" command has been performed.

Menu System

User's Setup

The User Setup command allows random access the setup controls of the projector. The more experienced operator typically uses this function.



H Pos	Pix Clock	Border	Full Screen	Restore	Factory Default
V Pos	Clk Phase	Format	Unscaled	Scaling	Advanced

Help	Prev	Exit
------	------	------

H Pos Centers the active video area within maximum display area. Adjust for minimal image loss from side-to-side. Set the start point of the image on the left side. Adjust until the left edge of the image is just visible, but not cutoff.

V Pos Centers the active video area within maximum display area. Adjust for minimal image loss from top-to-bottom.

Pix Clock Reduces or eliminates vertical banding and focus problems by adjusting the length of each horizontal line to match the computer line length. Adjust until the right side of the image matches the display size or is not cut off by the border.

Clock Phase Adjust the timing of the pixels from the computer to match the timing of the pixels on the projector. Proper adjustment will give sharper vertical lines by using one pixel on the projector for a single pixel coming from the source.

Border The border command evokes the border control panel. The user can set the color of the border to either on of the primary colors or virtually any combination of them. The border is useful for centering sources that are less than the maximum 1024 x 768 resolution onto the screen.



Format

Use the Format command to select the closest matching format of the incoming signal from the List dialog box.



Full Screen This command scales the incoming signal to the maximum resolution of 1024 x 768.

Unscaled This command selects the signals original resolution for displays or changes a scaled signal back to its original resolution.

Restore Use this function to undo the last changes prior to the last save. See NOTE below.



NOTE: Channel data is saved when one of the following conditions occurs;

- 1.) 10-minutes after a change has been made, providing no other changes are made within the 10-minute save window.
- 2.) A new channel has been selected, or an action occurs which selects a new channel or source
- 3.) An explicit "Save As" command has been performed.

User's Setup "continued"

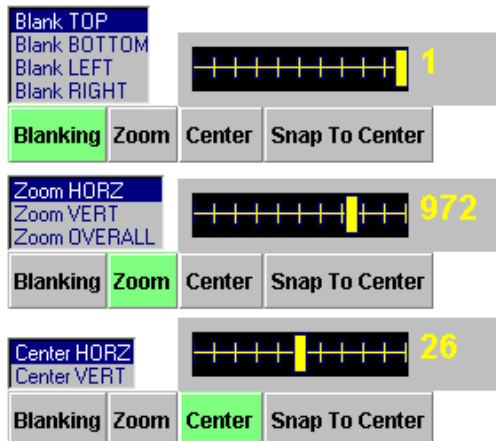
Scaling Provides the user with the ability to blank all four sides, Size or "zoom" the image in the horizontal, vertical or both directions, center the image horizontally, vertically or snap the image to horizontal/vertical centers. See Scaling controls.



Blanking - Adjust the four sides of the image until all unwanted video is eliminated or wanted information is visible.

Zoom - Adjust the image size in the horizontal, vertical or both directions until optimal or desired effect is achieved.

Center - Center the image horizontally, vertically or snap the image to horizontal/vertical centers.



Factory Default

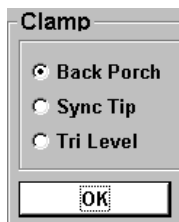


This command changes the current channel to predetermined factory default. Once evoked, the user is presented with a confirmation widow. Once overwrite is selected, all previously channel changes will be lost.

Advanced Evokes an additional function button bar. Under the Advance command the following functions are available:

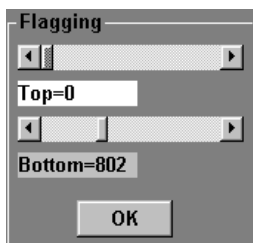


Clamp



Select the required black level clamp point. Select between "Back porch" (typically associated with Video or RGB 3-wire) or "Sync tip" (typically associated with RGB 4/5-wire) or "Tri-Level" (typically associated with HDTV) mode of operation on a channel-to-channel basis. See Clamp pop-up option box.

Flagging



Reduces the image flagging, tearing or jittering at the top and/or bottom of the image. Once selected the Flagging adjustment pop-up window is presented.

User's Setup "continued"

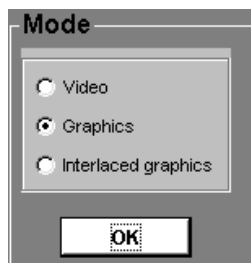
Advanced "continued"

View Data The View Data provides a comprehensive listing window of all of the user channels. This listing includes all the statistics that make-up a particular channel.

- The Highlighted column denotes the currently selected channel.
- Use the scroll bars at the bottom and right sides to move up-and-down or left-to-right.

Channel Data							
<Enter> to edit <Tab> to exit	1	2	3	4	5	6	7
	Internal	1024X768	720X400@	800X600@	compv	560X384@	1024X768
Name	Internal	1024X768	720X400@	800X600@	compv	560X384@	1024X768
Horz Freq	48468	56268	31450	35135	15715	24948	48345
Vert Freq	60.16	70.02	70.09	56.25	59.95	60.02	60.01
Vert Freq Bit Seq	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sync Status (hex)	80	80	70	30	DC	E4	F0
Mode	1	1	1	1	0	1	1
Source	Internal	RGB-1	RGB-1	RGB-1	Video	RGB-1	RGB-1
Source Type	0	0	0	0	0	0	0
Cap Start Pixel	200	277	132	400	94	150	257
Cap Start Line	255	34	35	144	17	14	33
Cap Num Pixels	984	1024	720	800	640	640	1024
Cap Num Lines	766	768	400	601	240	400	768
Disp Start Pixel	26	0	0	0	0	0	0
Disp Start Line	1	0	0	0	0	0	0
Disp Num Pixels	972	1024	1024	1024	1024	1024	1024
Disp Num Lines	766	768	768	768	768	768	768
Start Pixel Saved	0	0	0	8	192	0	8

Mode There are three (3) modes or processing choices for selection through the pop-up option box. The Video mode uses the built-in *Motion Adaptive Progressive Scan* (MAPS) conversation, The *Interlaced Graphics* mode applies Filed Jam and the *Graphics* mode uses neither the MAPS or Field Jam correction method.



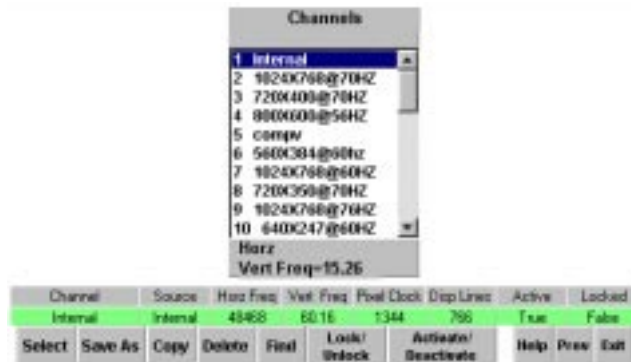
Restore See Restore above

Menu Command The Menu command provides additional access to the channel management system and to the projector utility area.

Menu System

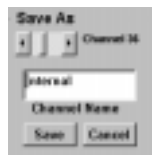


Menu-Channels Use the Channels command to access the channel management system with the following functions.



Select Highlight the desired channel, then press Select to choose the channel for display.

Save As First highlight the desired channel, then press Save As to evoke the Save As pop-up window. The Save As command will automatically select the next open channel number.



Copy The Copy command provides the ability to copy from channel to another. Once chosen, the Copy pop-up window is provided which allows you to direct from where you want to copy from to where you want to copy to.



Delete The delete command allows you to remove any unwanted or duplicate channels. Once selected a deletion confirmation window will presented, allow you to accept the deletion process or abort the operation.



Find This function will first, turn on Auto-Search, then automatically “find” a new channel and turn Auto-search back off. If Auto-Search is already “on”, this function has no effect.

Lock/Unlock This channel provides the ability to lockout any changes to channel settings. Press this command to toggle the Lock/Unlock operation. The status of the Lock/Unlock function is display in the main Channel command bar (above). Once activated a confirmation window will appear.



Activate / Deactivate This command allows you to remove the desired channel or channels from the look-up list used by the Auto-Search function. If a channel is tagged “deactivated” then Auto-search will bypass this particular channel during the Auto-Search process. Use this button to toggle the state of the highlighted channel. The user will be presented with a confirmation window.



Menu Command “continued”

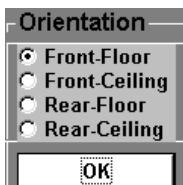
Menu-Utility

Several projector set-up and configuration commands are found under the Utility command.



Orient

Allows the user to select the desired projection application for the following modes. Front-Floor, Front-Ceiling, Rear-Floor and Rear-Ceiling. Press the Orient button to access the pop-up option box.



Freeze

Toggle Function. Use the Freeze command to freeze the motion of the projected image.

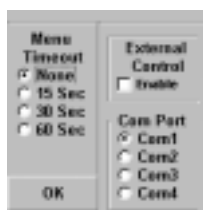
Patterns

Use the Patterns command to display a variety of test patterns or your own bitmap images. See Patterns List Box.



Configure

The configure options allows the user to set some additional operating parameters of the projector. Parameters such as, Menu Timeout, Enable External RS232 control and selecting which communication port to use.



Usage

Usage provides the user with the projector's serial number and elapsed time on the Lamp, Projector and PC. When installing a new lamp, reset the lamp elapsed time. See Usage items.



Auto Search

The Auto-Search option box allows the user to enable or disable the Auto-Search mode of operation.



Menu-Service

Password Required

Only qualified personnel use the Service command.



Chan 1: Chan n: Indicates the selected channel. Where “n” is the channel number.

Sel Channel *NOTE: Chan 0 indicates a temporary channel* has been created.*



Sel Channel: Press button to activate a channel list box. See below

- Use the scroll bar on the right side to move up and down the list.
- Once a channel is highlighted in the list window, use the Select button to choose the channel for display.
- The channel information bar at the bottom displays the more critical channel parameters.



Channel	Source	Horz Freq	Vert Freq	Pixel Clock	Disp Lines	Active	Locked
Internal	Internal	48468	60.16	1344	766	True	False

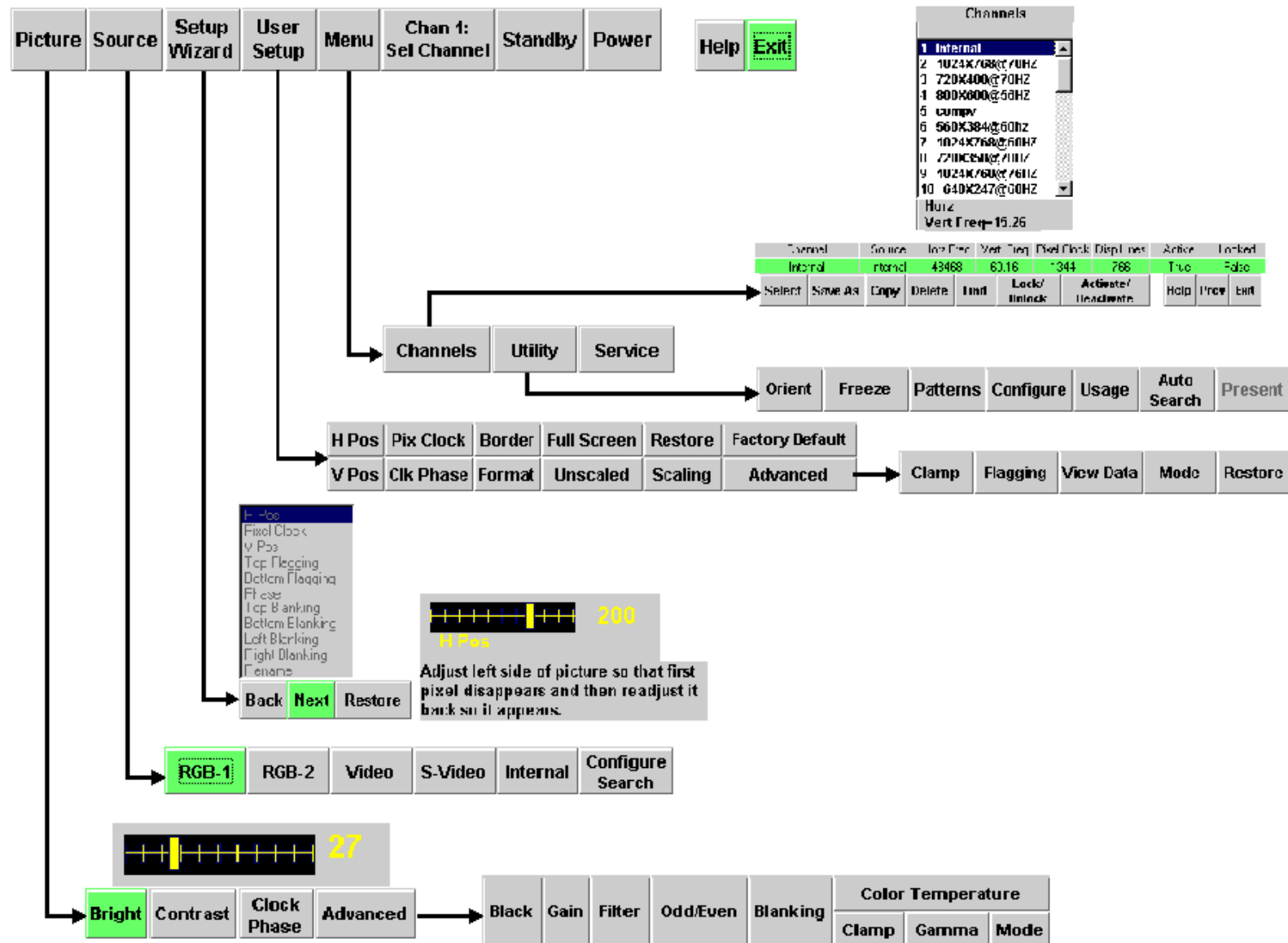
* Temporary Channel

- A temporary channel is denoted as a channel that has either been copied from the factory channel** list or a new channel created by system interpolation.
- A temp channel is designated as Channel 0 (zero).

** Factory Channel List

- The “factory” channel list is a read-only listing that is originally created at the factory and cannot be accessed directly by the user. This list contains a variety (100+) of common video and computer setups.

Menu Overview



Installation, Lens Adjustments & Lens Data Tables

Throw Distance The projector has a wide variety of lenses available, including multiple fixed and zooms. Refer to Lens Data Tables.

The throw distance is calculated by using the lens magnification factor times the desired image width.

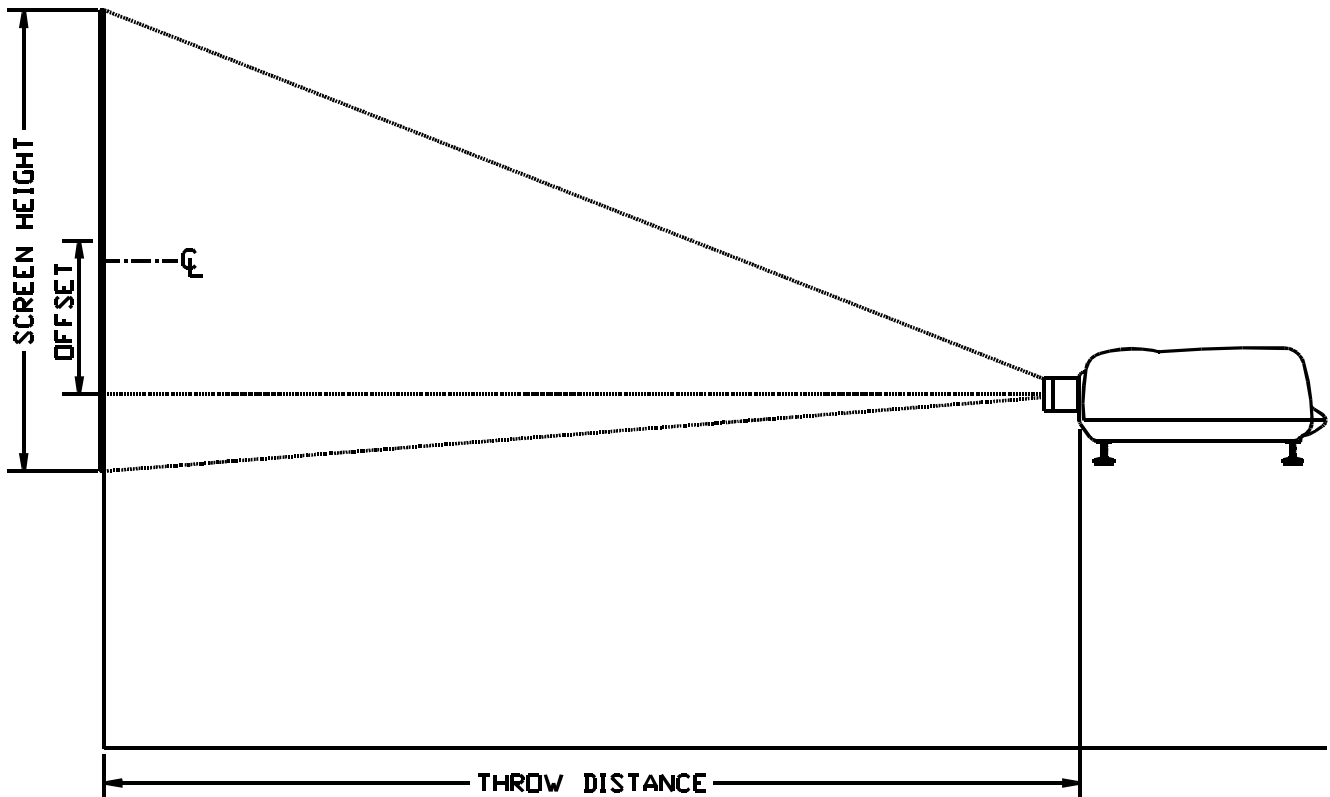
The 5200 has the ability to dynamically scale the incoming signal (resolution) to the full DMD resolution of 1024 x 768. This simply means that all sources can utilize the full resolution capability so image width should be lost. However, if your signal resolution is not equal to or greater than the DMD resolution and you do not scale to the full DMD resolution, image width and/or size will be smaller the actual screen size.

Projector Offset The projector incorporates a manual lens shift capability allowing a vertical (up-down) adjustment of the lens without moving the projector.

The maximum offset of the projector depends on;

- 1.) type of lens
- 2.) image height

Refer to the Fixed and Zoom Lens Data Tables.



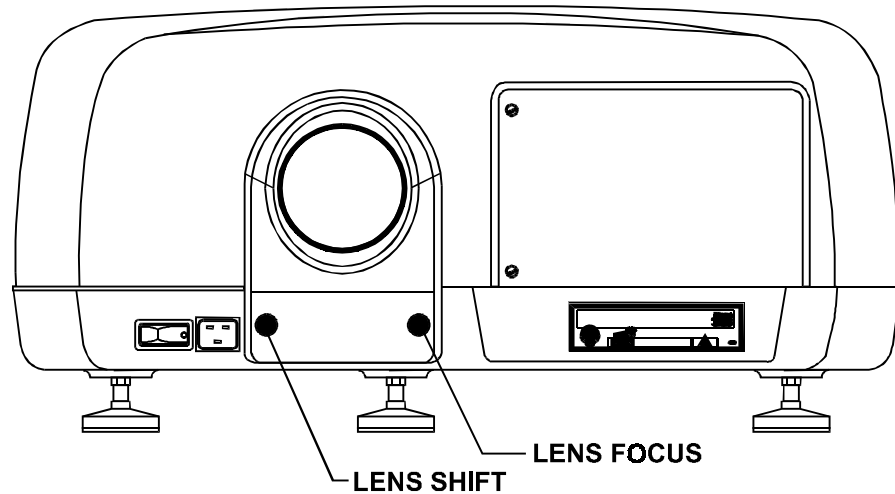
Optical Adjustments

Lens Shift Adjuster

The lens shift is adjusted by turning the lens shift knob located at the front of the projector. Adjust the lens shift until the image is centered within your screen area. See Below. Refer to the Lens Specifications for the maximum amount of lens shift for your particular lens.

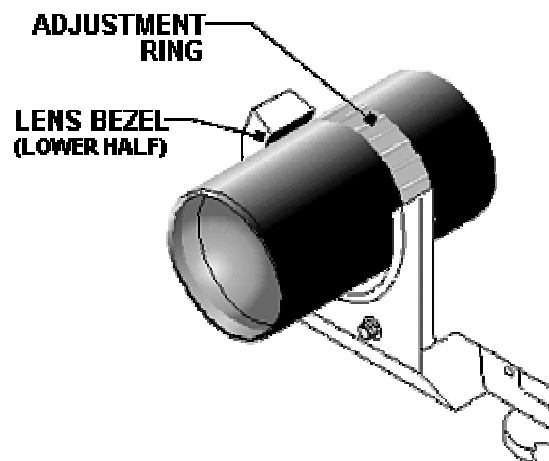
Lens Focus Adjuster

To focus the image, turn the lens focus knob (near the lens shift adjuster) to fine tune the lens focus. Adjust the knob until optimal focus is achieved. See Figure below.



Zoom Lens Adjustment

Open the top cover to access the zoom lens adjustment ring. The top cover may be unlocked by turning the two $\frac{1}{4}$ turn captive screws on both sides on the projector, close to the front of the projector. The actual adjustment ring is under the lens bezel. Grab the gray ring around the lens and rotate it back-and-forth until the proper or desired image size is achieved. See Figure below. Refocus the lens if necessary.



Fixed Lens Data Table

Data presented in the following tables are for reference use only!

1.0:1 Lens Specification/Throw Distance (Reference Only)								
Throw Distance: 4.6 ft. (1.4 m) - 30 ft. (9.1 m) @ 4:3 Ratio								
Pixel Vertical Offset @ 1024 x 768 = +/- 150 pixels								
Width		Image Size				Throw Distance		
		Height		Diagonal				
in.	mm	in.	mm	in.	mm	in.	ft.	m
55	1397	41.3	1048	68.8	1746	55.0	4.6	1.4
80	2032	60.0	1524	100.0	2540	80.0	6.7	2.0
120	3048	90.0	2286	150.0	3810	120.0	10.0	3.0
180	4572	135.0	3429	225.0	5715	180.0	15.0	4.6
240	6096	180.0	4572	300.0	7620	240.0	20.0	6.1
360	9144	270.0	6858	450.0	11430	360.0	30.0	9.1

2.3:1 Lens Specification/Throw Distance (Reference Only)								
Throw Distance: 17.2 ft. (5.5 m) - 110.4 ft. (33.6 m)								
Pixel Vertical Offset @ 1024 x 768 = +/- 150 pixels								
Width		Image Size				Throw Distance		
		Height		Diagonal				
in.	mm	in.	mm	in.	mm	in.	ft.	m
90	2286	67.5	1715	112.5	2858	207	17.3	5.3
102	2591	76.5	1943	127.5	3239	235	19.6	6.0
128	3251	96.0	2438	160.0	4064	294	24.5	7.5
256	6502	192.0	4877	320.0	8128	589	49.1	15.0
358	9093	268.5	6820	447.5	11367	823	68.6	20.9
576	14630	432.0	10973	720.0	18288	1325	110.4	33.6

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Fixed Lens Data Table “continued”

Data presented in the following tables are for reference use only!

3.9:1 Lens Specification/Throw Distance (Reference Only)								
Throw Distance: 19.0 ft. (5.8 m) - 118.0 ft. (36.0 m) @ 4:3 Ratio								
Pixel Vertical Offset @ 1024 x 768 = +/- 150 pixels								
Width		Image Size Height		Diagonal		Throw Distance		
in.	mm	in.	mm	in.	mm	in.	ft.	m
58	1483	43.8	1113	73.0	1854	228	19.0	5.8
80	2032	60.0	1524	100.0	2540	312	26.0	7.9
96	2438	72.0	1829	120.0	3048	374	31.2	9.5
120	3048	90.0	2286	150.0	3810	468	39.0	11.9
240	6096	180.0	4572	300.0	7620	936	78.0	23.8
363	9220	272.3	6915	453.8	11525	1416	118.0	36.0

5.5:1 Lens Specification/Throw Distance (Reference Only)								
Throw Distance: 26.0 ft (8.0 m) - 164.0 ft. (50.0 m) @ 4:3 Ratio								
Pixel Vertical Offset @ 1024 x 768 = +/- 150 pixels								
Width		Image Size Height		Diagonal		Throw Distance		
in.	mm	in.	mm	in.	mm	in.	ft.	m
60	1524	45.0	1143	75.0	1905	330	27.5	8.4
80	2032	60.0	1524	100.0	2540	440	36.7	11.2
100	2540	75.0	1905	125.0	3175	550	45.8	14.0
120	3048	90.0	2286	150.0	3810	660	55.0	16.8
180	4572	135.0	3429	225.0	5715	990	82.5	25.1
240	6096	180.0	4572	300.0	7620	1320	110.0	33.5
358	9093	268.5	6820	447.5	11367	1969	164.1	50.0

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Zoom Lens Data Table

Data presented in the following tables are for reference use only!

1.2-2.3:1 Lens Specification/Throw Distance (Reference Only)											
Throw Distance: 5.9 ft. (1.8 m) - 70.3 ft. (21.4 m) @ 4:3 Ratio											
Pixel Vertical Offset @ 1024 x 768 = 0 pixels											
Image Size						Throw Distance					
Width		Height		Diagonal		Min			Max		
in.	mm	in.	mm	in.	mm	in.	ft.	m	in.	ft.	m
60	1524	45.0	1143	75.0	1905	72.0	6.0	1.8	138.0	11.5	3.5
80	2032	60.0	1524	100.0	2540	96.0	8.0	2.4	184.0	15.3	4.7
120	3048	90.0	2286	150.0	3810	144.0	12.0	3.7	276.0	23.0	7.0
180	4572	135.0	3429	225.0	5715	216.0	18.0	5.5	414.0	34.5	10.5
200	5080	150.0	3810	250.0	6350	240.0	20.0	6.1	460.0	38.3	11.7
360	9144	270.0	6858	450.0	11430	432.0	36.0	11.0	828.0	69.0	21.0
2.3-5.5:1 Lens Specification/Throw Distance (Reference Only)											
Throw Distance: 19.0 ft. (5.8 m) - 118.0 ft. (36.0 m) @ 4:3 Ratio											
Pixel Vertical Offset @ 1024 x 768 = 0 pixels											
Image Size						Throw Distance					
Width		Height		Diagonal		Min			Max		
in.	mm	in.	mm	in.	mm	in.	ft.	m	in.	ft.	m
58	1483	43.8	1113	73.0	1854	134	11.2	3.4	321.2	26.8	8.2
80	2032	60.0	1524	100.0	2540	184	15.3	4.7	440.0	36.7	11.2
96	2438	72.0	1829	120.0	3048	221	18.4	5.6	528.0	44.0	13.4
120	3048	90.0	2286	150.0	3810	276	23.0	7.0	660.0	55.0	16.8
240	6096	180.0	4572	300.0	7620	552	46.0	14.0	1320.0	110.0	33.5
257	6528	192.8	4896	321.3	8160	591	49.3	15.0	1413.5	117.8	35.9
1.5-2.5:1 Lens Specification/Throw Distance (Reference Only)											
Throw Distance: 17.2 ft. (3.0 m) - 110.4 ft. (25.0 m)											
Pixel Vertical Offset @ 1024 x 768 = +/- 360 pixels											
Image Size						Throw Distance					
Width		Height		Diagonal		Min			Max		
in.	mm	in.	mm	in.	mm	in.	ft.	m			
80	2032	60.0	1524	100.0	2540	120	10.0	3.0	408.0	34.0	10.4
102	2591	76.5	1943	127.5	3239	153	12.8	3.9	520.2	43.4	13.2
128	3251	96.0	2438	160.0	4064	192	16.0	4.9	652.8	54.4	16.6
192	4877	144.0	3658	240.0	6096	288	24.0	7.3	979.2	81.6	24.9
358	9093	268.5	6820	447.5	11367	537	44.8	13.6	N/A	N/A	N/A
458	11633	343.5	8725	572.5	14542	687	57.3	17.4	N/A	N/A	N/A
558	14173	418.5	10630	697.5	17717	837	69.8	21.3	N/A	N/A	N/A
620	15748	465.0	11811	775.0	19685	930	77.5	23.6	N/A	N/A	N/A
655	16637	491.3	12478	818.8	20796	983	81.9	25.0	N/A	N/A	N/A

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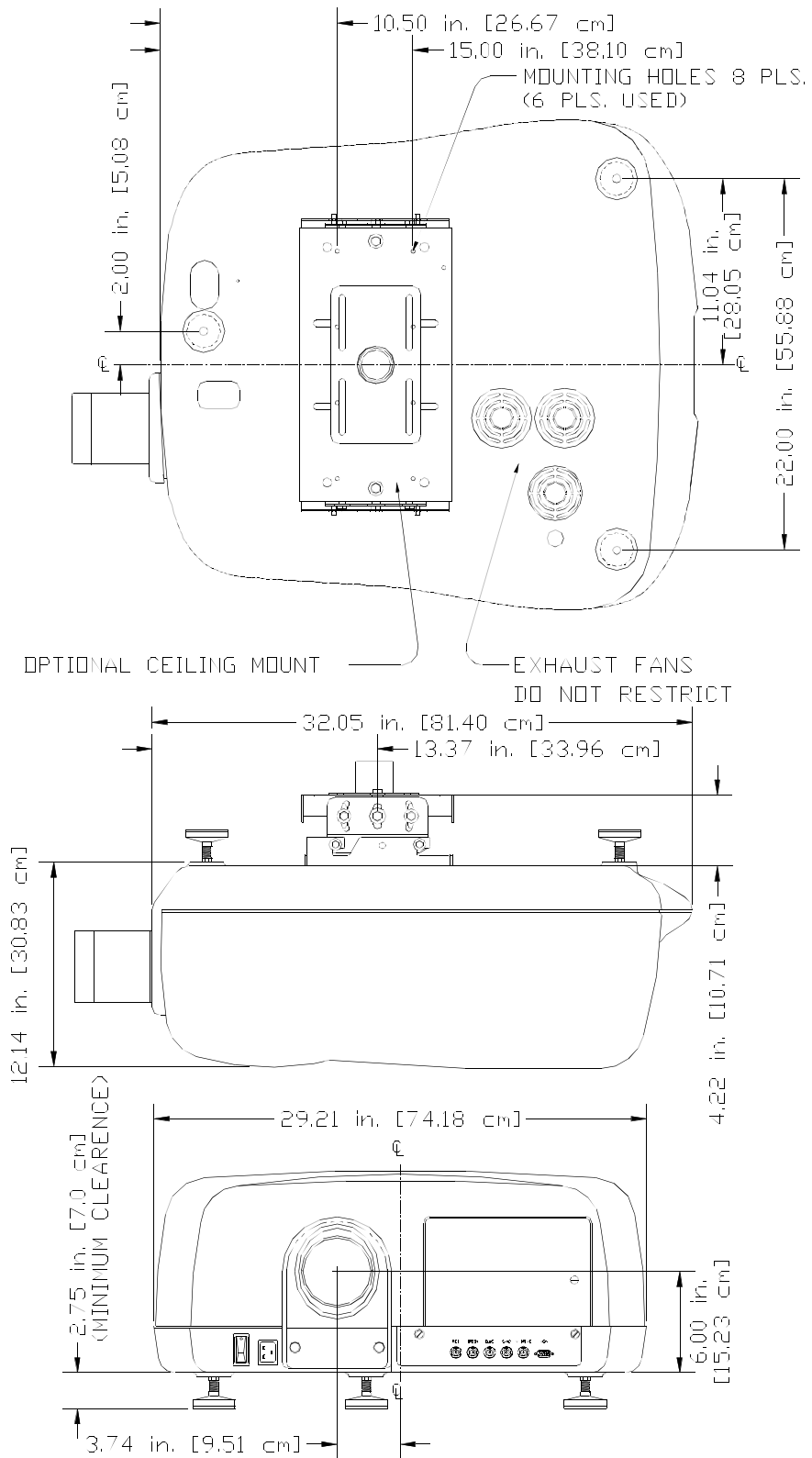
Zoom Lens Data Table “continued”

Data presented in the following tables are for reference use only!

2.5-4.0:1 Lens Specification/Throw Distance (Reference Only)											
Throw Distance: 16.4 ft (5.0 m) - 131.0 ft. (40.0 m) @ 4:3 Ratio											
Pixel Vertical Offset @ 1024 x 768 = +/- 360 pixels											
Width		Image Size				Throw Distance					
		Height		Diagonal		Min			Max		
in.	mm	in.	mm	in.	mm	in.	ft.	m	in.	ft.	m
50	1270	37.5	953	62.5	1588	125	10.4	3.2	200	16.7	5.1
60	1524	45.0	1143	75.0	1905	150	12.5	3.8	240	20.0	6.1
80	2032	60.0	1524	100.0	2540	200	16.7	5.1	320	26.7	8.1
100	2540	75.0	1905	125.0	3175	250	20.8	6.4	400	33.3	10.2
120	3048	90.0	2286	150.0	3810	300	25.0	7.6	480	40.0	12.2
180	4572	135.0	3429	225.0	5715	450	37.5	11.4	720	60.0	18.3
240	6096	180.0	4572	300.0	7620	600	50.0	15.2	960	80.0	24.4
394	10008	295.5	7506	492.5	12510	985	82.1	25.0	1576	131.3	40.0
4.0-7.0:1 Lens Specification/Throw Distance (Reference Only)											
Throw Distance: 26.25 ft. (8.0m) - 229.6 ft. (70.0 m)											
Pixel Vertical Offset @ 1024 x 768 = +/- 200 pixels											
Width		Image Size				Throw Distance					
		Height		Diagonal		Min			Max		
in.	mm	in.	mm	in.	mm	in.	ft.	m	in.	ft.	m
90	2286	67.5	1715	112.5	2858	360	30.0	9.1	630	52.5	16.0
102	2591	76.5	1943	127.5	3239	408	34.0	10.4	714	59.5	18.1
128	3251	96.0	2438	160.0	4064	512	42.7	13.0	896	74.7	22.8
256	6502	192.0	4877	320.0	8128	1024	85.3	26.0	1792	149.3	45.5
358	9093	268.5	6820	447.5	11367	1432	119.3	36.4	2506	208.8	63.7
394	10008	295.5	7506	492.5	12510	1576	131.3	40.0	2758	229.8	70.1
630	16002	472.5	12002	787.5	20003	2520	210.0	64.0	N/A	N/A	N/A
689	17501	516.8	13125	861.3	21876	2756	229.7	70.0	N/A	N/A	N/A

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Projector Dimensions



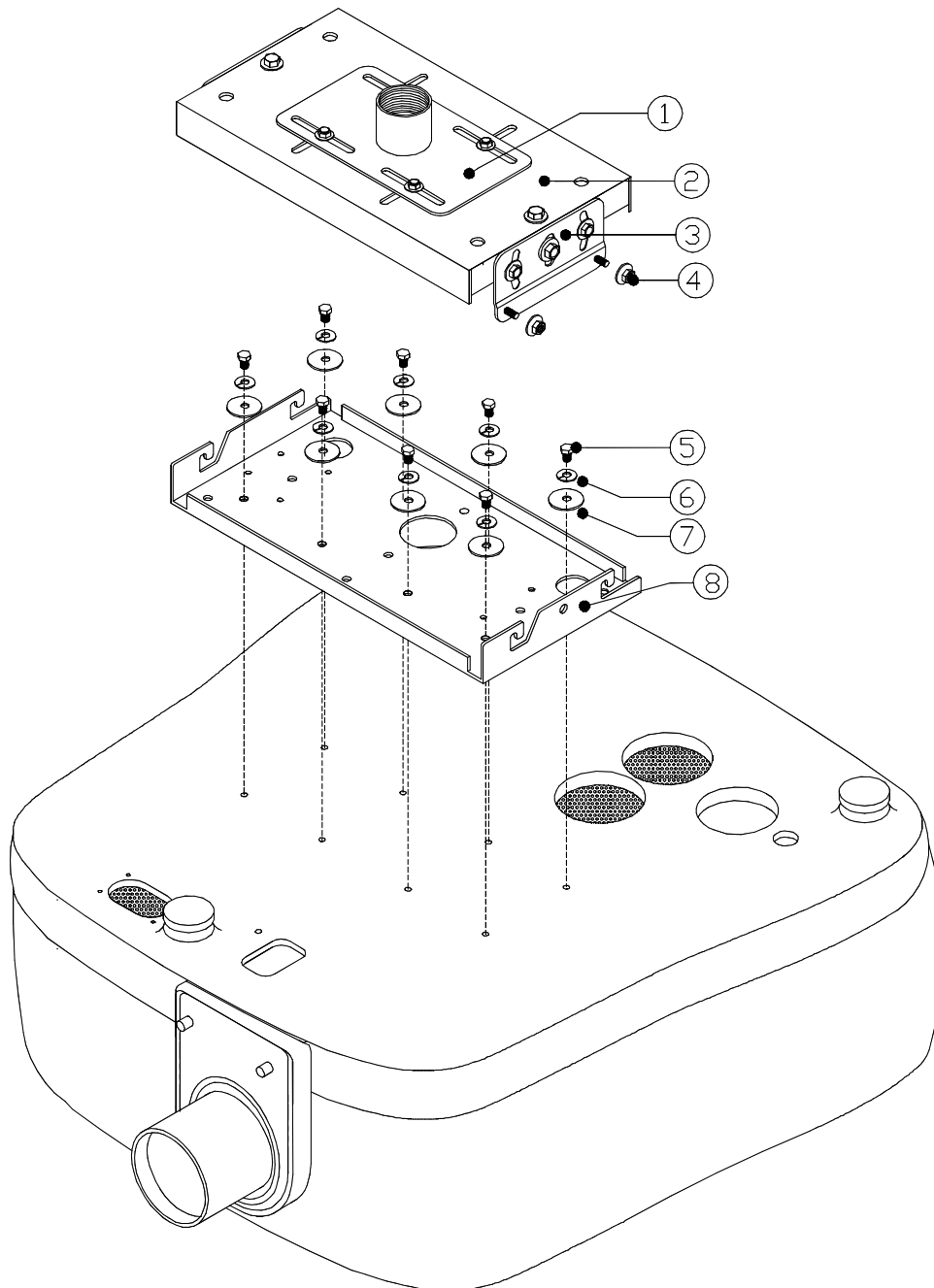
* ALL DIMENSIONS ARE NOMINAL

Ceiling Mount Information

Ceiling Mount (69728) Parts List

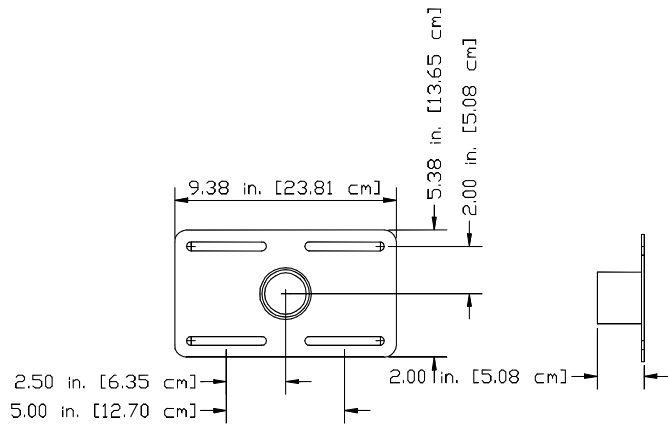
Item	Description	Qty	Item	Description	Qty
1	Top Slide Bracket w/1-1/2" Pipe Coupler	1*	5	5/16-18 x 5/8" Hex Bolts	6
2	Ceiling Mount Housing	1	6	5/16 I.D. Split Lock Washer	6
3	Mounting Plates	2	7	5/16 I.D. Flat Washer	6
4	5/16-18 Flange Nuts	4	8	HB-Hanging Bracket	1

* 1 (one) Slide Bracket included w/kit. Depending on your particular application, an additional bracket may be required.

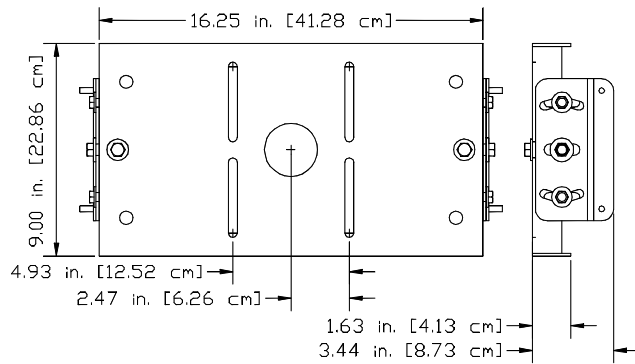
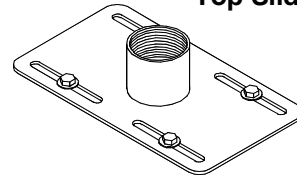


Ceiling Mount Information

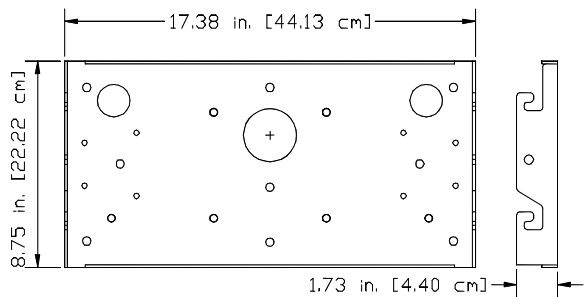
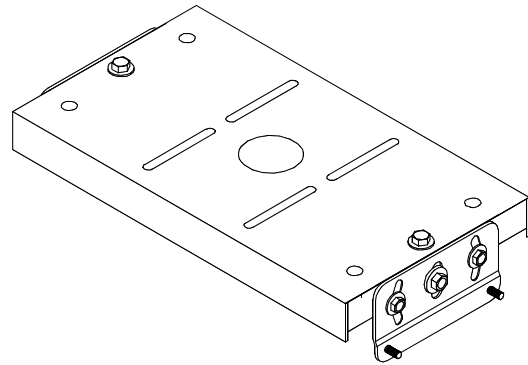
Ceiling Mount (69728) Dimensions



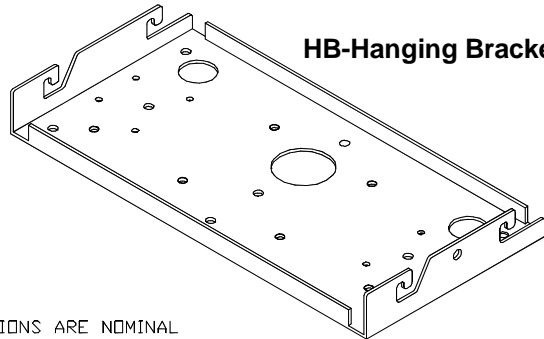
Top Slide Bracket



Ceiling Mount Housing



HB-Hanging Bracket



ALL DIMENSIONS ARE NOMINAL

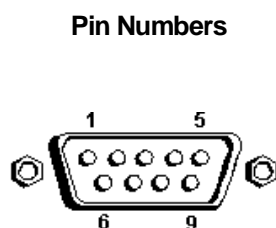
RS-232C Interface Data

An external PC or third party controller may be used to control your ALICE 5200. This section will describe how to connect and control the 5200 DLP projector using external serial communication with characters and numeric commands.

Enabling Com Ports

As standard, Serial Port 1 (COM1) is unused and may be used for the external control of the projector. Perform the following to enable external control and select which Serial Port to use;

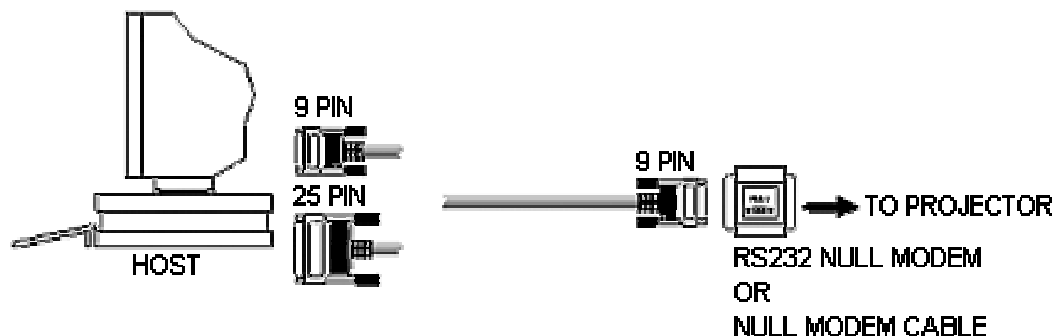
- Open the Main menu
- Select MENU, then
- Select UTILITY
- Select CONFIGURE, a pop-up selection box will open.
- Select External Control Enable, then select the desired "Com Port".
- Exit the menu system.
- Restart the system



Com 1 & 2 Pin Assignments

Pin Assignments			
PIN	SIGNAL	PIN	SIGNAL
1	Data Carrier Detect	6	Data Set Ready
2	Serial Input	7	Request To Send
3	Serial Output	8	Clear To Send
4	Data terminal ready	9	Ring Indicator
5	Signal Ground	Shell	Chassis Ground

Basic Connection Diagram



Protocol 9600 baud, no parity, 8 data bits and 1 stop bit.

**Character /
Numeric
Commands**

Commands to the projector are two general types. Character commands and Numeric commands. Character commands in fact consist of two types. Some of them put the projector into a particular adjustment mode. For example, sending a letter B puts the projector into brightness adjustment mode. Once in that mode, adjustments may be done it two ways. The character + (plus) and – (minus) respectively increase and decrease the parameter. Alternatively, a numeric value can be assigned for the parameter by following the mode character with an integer value, followed by a repetition of the mode character. For example, the command B75B would set the brightness to 75% of maximum.

Other commands carry out a single action such as selecting a channel, deleting a channel, etc. Some of these commands use a prefixed integer parameter, while others use following integer parameters and/or text strings for channel names. For example, the command 12! Would select channel 12 and I12 13 NYSC would copy channel 12 to channel 13 and give the name NTSC to channel 13.

All numeric parameters are integers. A decimal point is neither needed nor recognized. Channel names must consist of upper and/or lower case letters, the digits 0 through 9, the under bar character “_” and blanks. Numeric parameters are ranged checked. For those commands that use a percentage value of 0 to 100, values outside those limits are accepted and limited to the range of 0 to 100. For commands that use absolute value parameters such as Phase, values outside the allowed range are simply rejected. The acceptable range of each parameter is indicated in the Character Command Tables.

Any non-digit character such as carriage return, comma, blank, tab, etc., terminates a channel name. For this reason the command K12 would delete channel 12 but K 12 would be rejected since a blank (non-numeric character) following the letter K would terminate the search for the channel name parameter.

**Character
Command Table**

CODE	DESCRIPTION	CODE	DESCRIPTION
A	Source Select: Use nA where n = 0(RGB1), 1(RGB2), 2(Video), 3(S-Video), 4(Internal)	V	Vertical: Use +/- or VnV, where n = 0 - 1023
B	Brightness: Use +/- or BnB, where n = 0 - 100	W	Horizontal: Use +/- or WnW, where n = 24 - 527
C	Color: Use +/- or CnC, where n = 0 - 100	X	Future Use
D	Detail: Use +/- or DnD, where n = 0 - 100	!	Channel Select: !n, where n = desired channel number
E	Phase: Use +/- or EnE, where n = 0 - 254	\$	Help
F	Bottom Flagging: Use +/- or FnF, where n = 192 - 2047	(Standby ON
G	Top Flagging: Use +/- or GnG, where n = 0 - 127)	Standby OFF
H	Tint: Use +/- or HnH, where n = 0 - 100	[Power ON
I	Channel Copy From, To, Name (optional)]	Power OFF
J	Jitter: Use +/- or JnJ, where n = 0 - 7		Future Use
K	Channel Delete: Enter Channel Name	^	Auto Search ON
L	Channel Find	_	Auto Search Off (underscore)
M	Channel Save As: Number, Name (optional)	{	Lock Channel (write-protect)
N	Pixels: Use +/- or NnN, where n = 64 - 2048, must be even number	}	Unlock Channel
O	Power (toggle)	#	Code Command: n# (see next table)
P	Contrast: Use +/- or PnP, where n = 0 - 100	+	Increase selected parameter level
Q	Channel Lock (toggle)	-	Decrease selected parameter level
S	Standby (toggle)		

Numeric
Command Table

CODE	DESCRIPTION	NOTE
101#	Bit Sequence: Use 101#n, where n = 0 - 61	1
110#	Border Red: Use 110#n, where n = 0 - 255	
111#	Border Green: Use 111#n, where n = 0 - 255	
112#	Border Blue: Use 112#n, where n = 0 - 255	
113#	Black Level Red: Use 113#n, where n = 1 - 254	
114#	Black Level Green: Use 114#n, where n = 1 - 254	
115#	Black Level Blue: Use 115#n, where n = 1 - 254	
116#	Gain Red: Use 116#, where n = 0 - 63	
117#	Gain Green: Use 117#n, where n = 0 - 63	
118#	Gain Blue: Use 118#n, where n = 0 - 63	
119#	Gain Master: Use 119#n, where n = 0 - 63	
130#	Clamp Back Porch	
131#	Clamp Sync Tip	
132#	Field: Use 132#n, where n = 0 - 3	2
133#	Odd/Even: Use 133#n, where n = 0 - 5	3
134#	Filter Select: Use 134#n, where n = 0 - 2	4
135#	Filter Frequency: Use 135#n, where n = 8 - 40	5
136#	Color Matrix: Use 136#n, where n = 0(disable), 1(enable)	
137#	Orientation: Use 137#n, where n = 0 - 3	
138#	Test Patterns: Use 138#n where n = 0 - 6	6
139#	Reset lamp Hours	7
140#	Presentation Mode (toggle)	
141#	Faroudja Tint: Use 141#n, where n = 0 - 63	
142#	Faroudja Delay: Use 142#n, where n = 0 - 15	
143#	Source/Channel Query: Use 143#, response is source text, channel #.	7

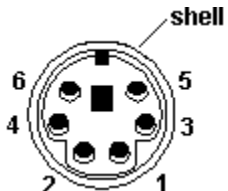
NOTES

- Bit Sequence, parameter values 0 through 30 select sequence number n with "run-once" set to 0. Values 31 through 61 select sequence number n - 31 with "run-once" set to 1.
- Field, parameters 0 through 3 select the 4 possible combinations of the frame drop and filed jam. Selections are; 0 = none 1 = frame drop 2 = filed jam 3 = frame drop and field jam
- Odd/Even, parameter values 0 through 5 select the 6 possible combinations of odd/even sense and even start line. The selections are;
0 = non-standard w/even start line = odd
1 = standard w/even start line = odd
2 = non-standard w/even start line = odd-1
3 = standard w/even start line = odd-1
4 = non-standard w/even start line = odd+1
5 = standard w/even start line = odd+1
- Filter Select, parameter n values are; 0 = none 1 = video filter 2 = graphic filter
- Orientation, parameter n values are;
0 = front/floor
1 = front/ceiling
2 = rear/floor
3 = rear/ceiling
- Test Pattern; parameter n values are;
0 = off 1 = flat field
2 = smooth gray
3 = large checkerboard
4 = grid
5 = gray bars
6 = small checkerboard
- Source/Channel query; this command answer back with the name of the current source and the current channel number. Source names are RGB-1, RGB-2, Video, S-Video and Internal.

Connector Pin Assignments

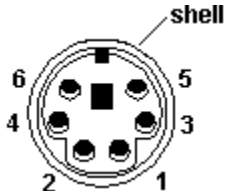
Keyboard Port

Your projector comes standard with a wireless keyboard. The cables and adapters for connecting the keyboard IR receiver are provided.

Keyboard Port Pin Numbers	Keyboard Port Pin Assignments		
	Pin	Signal	
	1	Keyboard Data	KBDATA
	2	No Connection	N/C
	3	Signal Ground	GND
	4	Fused Supply Voltage	FVcc
	5	Keyboard Clock	KBCLK
	6	No Connection	N/C
	Shell	Chassis Ground	N/A

P/S 2 Mouse Port

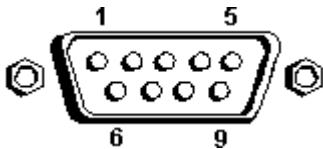
The mouse port is used to connect the IR Keyboard Mouse Pad.

Mouse Port Pin Numbers	Mouse Port Pin Assignments		
	Pin	Signal	
	1	Mouse Data	MFDATA
	2	No Connection	N/C
	3	Signal Ground	GND
	4	Fused Supply Voltage	FVcc
	5	Mouse Clock	MFCLK
	6	No Connection	N/C
	Shell	Chassis Ground	N/A

Serial Port 1 & 2 (COM 1 & 2)

COM1: Unused. Use for third party or external RS232 control.

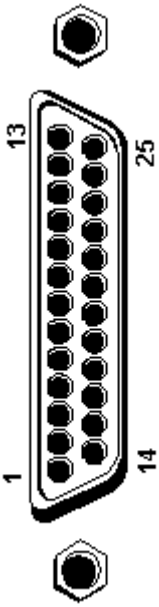
COM2: Used to connect the IR Remote Control Receiver.

COM 1 & 2 Pin Numbers	COM 1 & 2 Pin Assignments	
	Pin	Signal
	1	Data Carrier Detect
	2	Serial Input
	3	Serial Output
	4	Data terminal ready
	5	Signal Ground
	6	Data Set Ready
	7	Request To Send
	8	Clear To Send
	9	Ring Indicator
	Shell	Chassis Ground

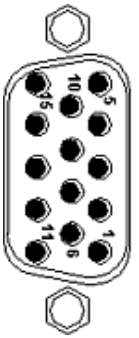
Parallel Port (LPT2)

If you reconfigure your hardware, you may need the pin numbers and assignments for the parallel port connector.

The figure below illustrates the pin numbers for the parallel port connector and the Table (to the right) list and defines the pin assignments for the parallel port connector.

LPT2 Pin Numbers	LPT2 Pin Assignments		
	PIN	SIGNAL	
	1	Strobe	STB#
	2	Printer Data Bit 0	PD0
	3	Printer Data Bit 1	PD1
	4	Printer Data Bit 2	PD2
	5	Printer Data Bit 3	PD3
	6	Printer Data Bit 4	PD4
	7	Printer Data Bit 5	PD5
	8	Printer Data Bit 6	PD6
	9	Printer Data Bit 7	PD7
	10	Acknowledge	ACK#
	11	Busy	BUSY
	12	Paper End	PE
	13	Select	SLCT
	14	Automatic Feed	AFD#
	15	Error	ERR#
	16	Initialize Printer	INIT#
	17	Select In	SLIN#
	18-25	Signal Ground	GND

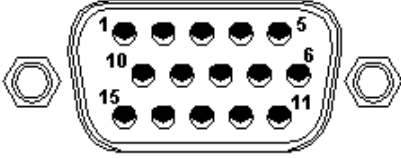
RGB2 Input (HD15 pin)

RGB2 Pin Numbers	RGB2 Pin Assignments			
	PIN	SIGNAL	PIN	SIGNAL
	1	Red Video	9	No Pin
	2	Green Video	10	Ground
	3	Blue Video	11	ID Bit
	4	ID Bit	12	ID Bit
	5	Self Test	13	Horizontal Sync
	6	Red Return	14	Vertical Sync
	7	Green Return	15	ID Bit
	8	Blue Return		


Internal Video Card "OUT" (HD15 pin)

This port may be used to display the internal SXGA source to an external monitor.

Used primarily when servicing the projector.

Internal Video Card "OUT" Pin Numbers	Internal Video Card "OUT" Pin Assignments		
	Pin	Signal	
	1	Red Video	RED
	2	Green Video	GREEN
	3	Blue Video	BLUE
	4	Ground	GND
	5	DDC Return	DCD RET
	6	Ground Red	GND RED
	7	Ground Green	GND GRN
	8	Ground Blue	GND BLU
	9	Reserved	RESV
	10	Ground Sync	GND SYNC
	11	Ground	GND
	12	DDC Data	DDC DATA
	13	Horizontal Synchronization	HSYNC
	14	Vertical Synchronization	VSYNC
	15	DDC Clock	DDC CLK

S-Video Input (4 pin mini D)

S-Video Pin Numbers	S-Video Pin Assignments	
	PIN	SIGNAL
	1	Ground
	2	Ground
	3	"Y" (1vp-p)
	4	"C" (0.285vp-p)

Specifications and Options

5200 Specifications	
Brightness	2000 (ANSI Lumens)
DMD Chip Resolution	1024 x 768
Contrast	250:1 ANSI
Horizontal Scan Rate	15-64 kHz
Vertical Scan Rate	30-120 Hz
Source Compatibility	1280 x 1024
Computer Features	
Pentium Processor	233 MHz with MMX
Hard Drive	4 GB
Memory	64 MB
ISA/PCI Slots	7 Total
Model Features	IR Keyboard / Mouse & Remote Control, Windows, CD-ROM, Modem, Network Interface, and Audio Card
Physical	
Power/Voltage	1200 W / 85-240 VAC (auto-ranging)
Dimensions	11.7" H x 29" W x 32" D (30 cm H x 74 cm W x 82 cm D)
Weight (net)	80 lbs. (37 kg)
Lamp Type	500 Watt Xenon Arc Lamp
Colors	16,700,000
Color Temperature	3600 °K, 6500 °K, 9200 °K, User
Temperature	
Operating	50° to 104°F (10° to 40°C)
Storage	32° to 150° F (0° to 65°C)
Noise Level	<45 dbA (1 meter)
Remote Control	
IR Keyboard/Mouse & Remote	Keyboard / mouse & remote control offer complete control of projection functions through the user interface.
RS-232C	Codes supplied for computer control or conference room system controller (mask on-screen menus)
Lens Shift	≈ ± 1/2 total image height from center screen (lens depended)
Certifications	CE and FCC approved, UL pending
Internal Test Patterns	Color bars, gray scale, checkerboard, crosshatch, and others
<i>Specifications subject to change without prior notice.</i>	

Options		
Lenses	Fixed: 1.0:1, 2.3:1, 3.9:1, 5.5:1 Zoom: 1.2-2.3:1, 2.34-5.5:1, 1.5-2.5:1, 2.5-4.0:1	
Switcher	8-channel, 250Mhz bandwidth, table or rack mount switcher with separate or composite sync inputs, audio follow, RGsB, Video or S-Video and 5' (152 cm) RS-232C cable	
Ceiling Mount Kit	Ceiling mount kit with adjustments for roll, pitch and yaw	
Remote Controls	Infrared Keyboard / mouse & remote	
Manual	Service Manual	
Input Options	Faroudja Video/S-Video decoder for NTSC and Pal AmPro Quad Decoder for NTSC, Pal and SECAM	
Retro Consoles		
Options that empower ALICE for cutting edge applications Available from AmPro or your PC Vendor		
Teleconference Package	Audio Card	IR Extension
Theater Controller	Modem	Wired Keyboard and Mouse
DVD	ISDN Modem	TV Tuner
Windows NT workstation	CD-ROM	RF Mouse
Microsoft Office 97	Memory Upgrade/16 MB	Scanner
Decryption Capability	Hard Drive Upgrade	SCSI Port
Network Card		

Lamp Module Replacement Procedure



A replacement lamp module may be purchased (P/N 69736) from your selling dealer an authorized AmPro Service Center or AmPro Corporation.

Replacement Procedures



**CAUTION
HOT
SURFACES**

The lamp module is accessed on the rear of the projector. It consists of a 500W Xenon lamp mounted in a heat sink and housed in a protective plastic assembly.

! The lamp assembly is very hot during normal operation. To minimize risk of potential burns to the skin, allow time for the lamp assembly to cool to room temperature before servicing. Be sure to handle the lamp by its plastic housing only.

! The lamp is under great pressure at all times and may explode. To reduce the risk of personnel injury and/or property damage, when servicing the projector (display engine) wear safety glasses and allow the lamp to cool completely.

- ☐ STEP 1. De-energize the projector and remove the ac power cord.
- ☐ STEP 2. At the rear of the projector, unlock the lamp module access door and lift the hinged access door up.
- ☐ STEP 3. Open the two captive latches securing the lamp sub-assembly access door at the rear of the projector.
- ☐ STEP 4. Gently, pull the lamp assembly out by its plastic housing.
- ☐ If the lamp is too tight to remove, loosen the two lamp adjustment screws.
- ☐ STEP 5. To install the lamp module, slide the lamp assembly in. If the lamp adjustment screws were loosened, refer to Adjusting the Lamp Module (below). Close the inner access door, fasten the two captive latches and close the outer access door.

Adjusting the Lamp Module

- ◆ Test Pattern: Full white field or 9-quadrant test pattern.
- ◆ Test Equipment: Light Meter (optional).
- ☐ STEP 1. Adjust the lamp position as need using the two adjustment screws. See Figure next page.
- ☐ STEP 2. Re-open the outer access door.
- ☐ STEP 3. Remove the two plugs covering the two adjustment screws.
- ☐ STEP 4. It is optimal to adjust the light level using a light meter. However, if a light meter is not available, a visual adjustment will have to do.
- ☐ STEP 5. Typically the two adjustment screws are set to fully tighten.
- ☐ STEP 6A. If you are using a light meter, focus your attention on the center of the image. Adjust the screws for maximum light reading.
- ☐ STEP 6B. If you are visually setting the light output, adjust until the image appears too be the brightest.
- ☐ STEP 7. Replace the plugs and close the outer access door.

Lamp Module Disposal

The lamp inside the lamp module is under great pressure. DO NOT incinerate.



WARNING! Eye protection should be worn when working with the lamp to avoid injury from metal particles.

If Desired, pressure can be relieved by any means of breaking the copper tubular seal on the back of the lamp. Pliers and wire cutters work well to break the seal.

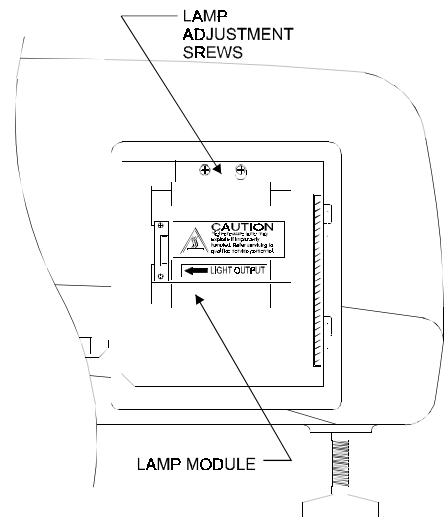
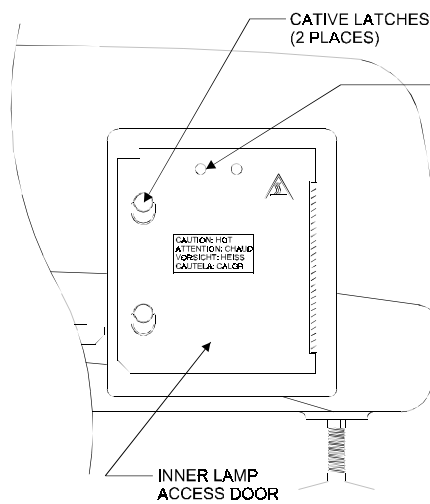
Lamps can be discarded as landfill garbage. However, the lamp operation timer contains a small amount of mercury and must be treated as hazardous waste if discarded in volume.

Illustrations



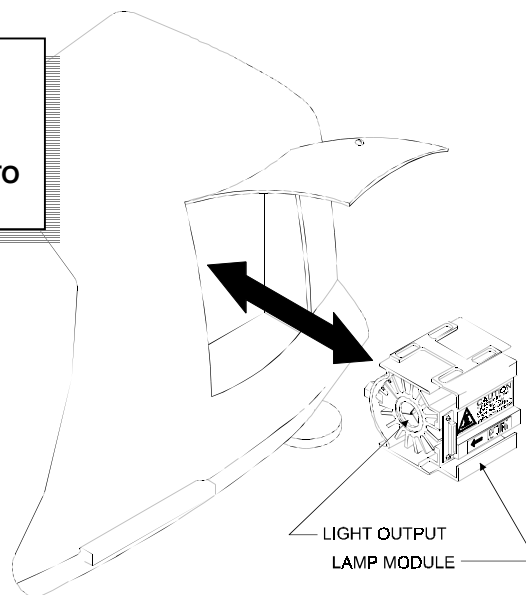
**CAUTION
HOT
SURFACES**

Rear View



CAUTION!

**HIGH-PRESSURE LAMP MAY EXPLODE IF
IMPROPERLY HANDLED. REFER SERVICING TO
QUALIFIED SERVICE PERSONNEL.**



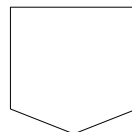
ALICE Help Guide 1

If your ALICE projector operating system is not working as expected, and you are not sure of what to do, start with this guide. This guide directs you through some initial checks and basic troubleshooting.

Help Chart Conventions



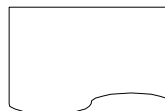
Start Symbol – Indicates the beginning of a help map.



Off-Page-Connector – Connects parts of a help map that extends across two or more pages.



Process Box – Encloses an action that needs to be performed.



Document – refers to a document or procedure relating to a particular point.

Analyzing Symptoms

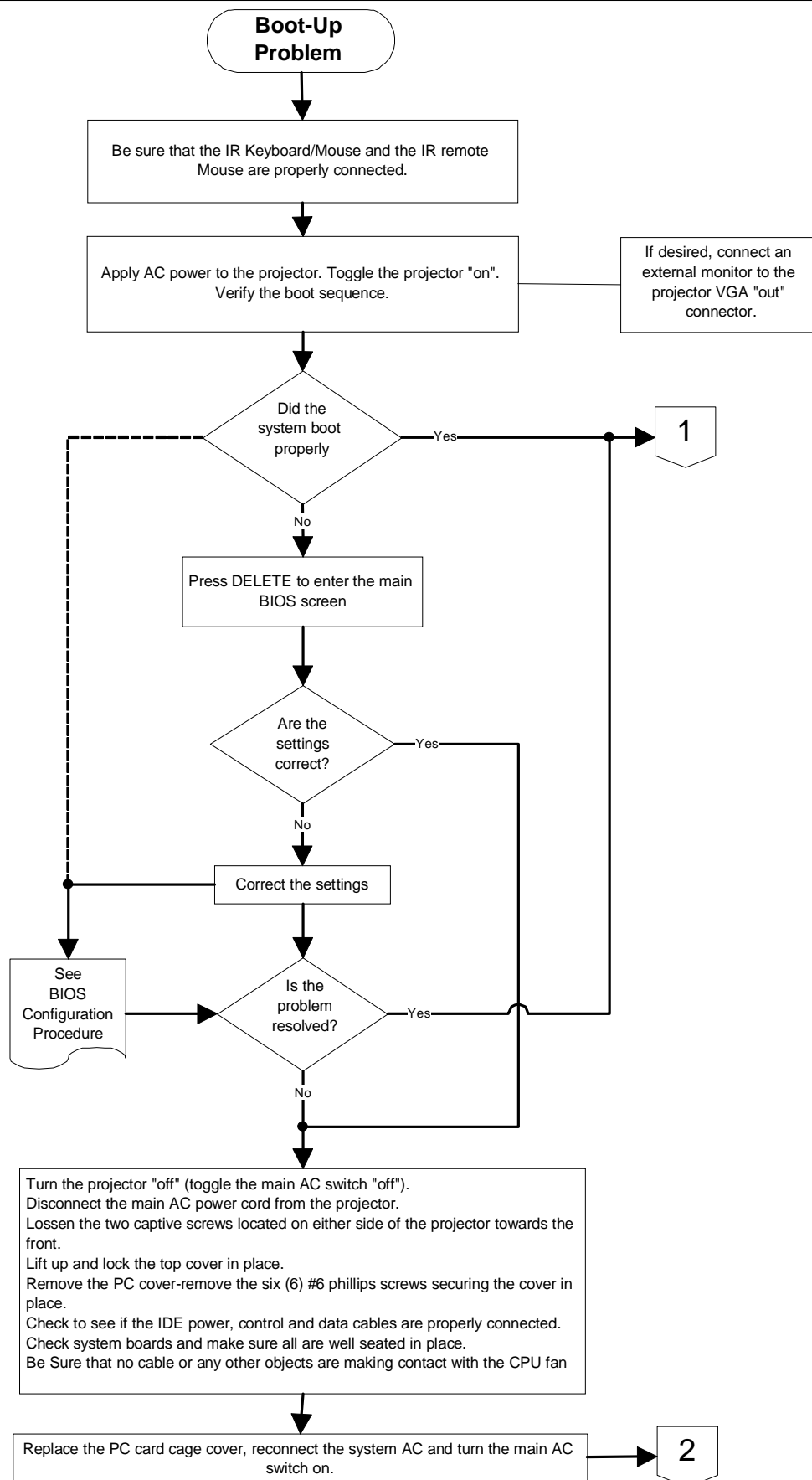
Start troubleshooting by analyzing the symptoms to determine a strategy for resolving the problem

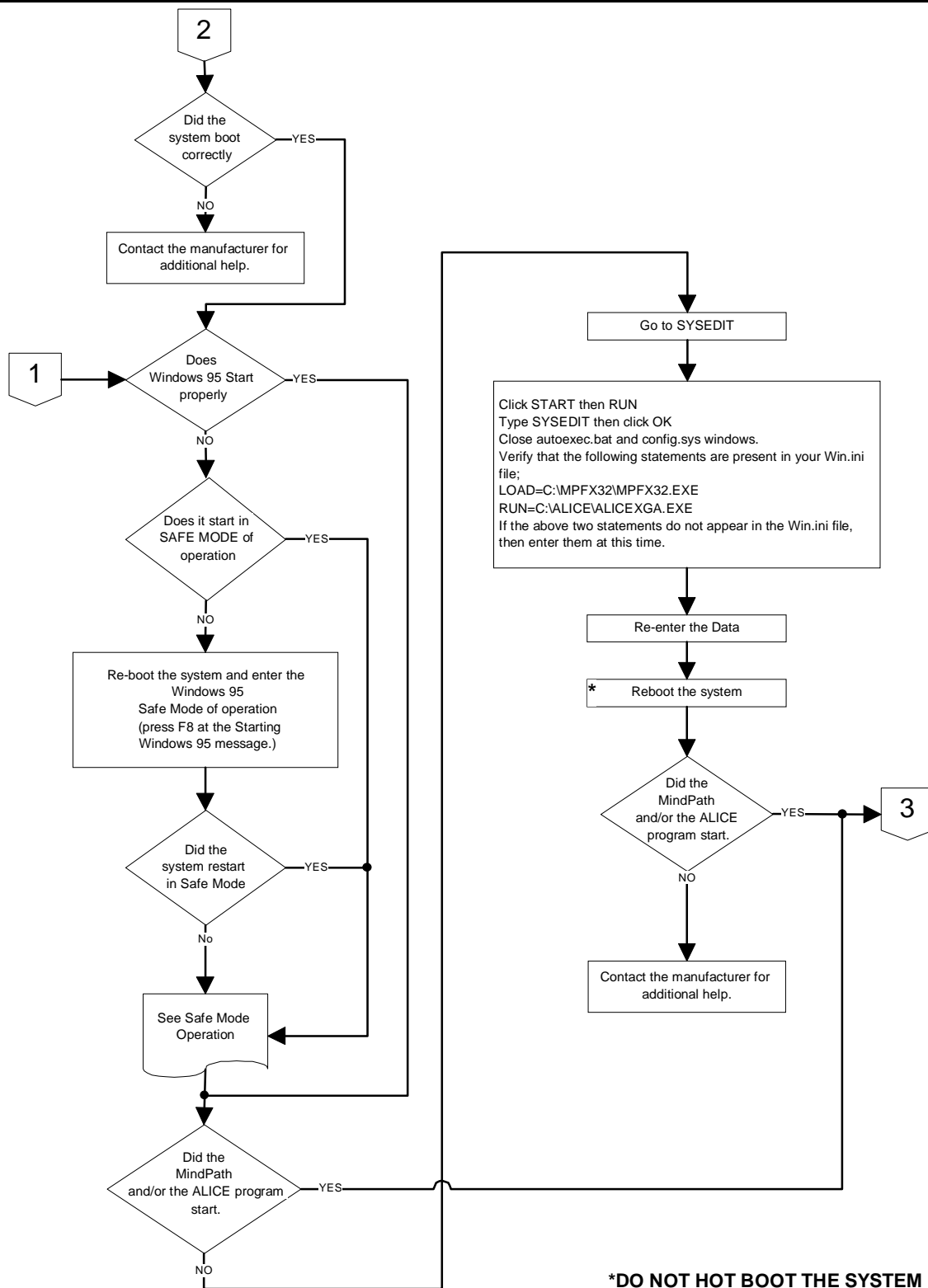
Consider the following;

- ◆ Has the system or configuration ever worked? If so, what changed?
- ◆ Is the error condition reproducible or random?
- ◆ Is the error specific to a particular system, configuration, or application?
- ◆ What particular hardware or firmware is involved?
- ◆ Are any non-Windows 95 device drivers or TSRs loaded?
- ◆ Does the order by which drives or application start-up make a difference?
- ◆ Does the error still occur with Safe Mode, or Safe Mode w/Network Support?
- ◆ For additional information relevant to Windows® 95 configuration and operation, please refer to the reference material included with your system.

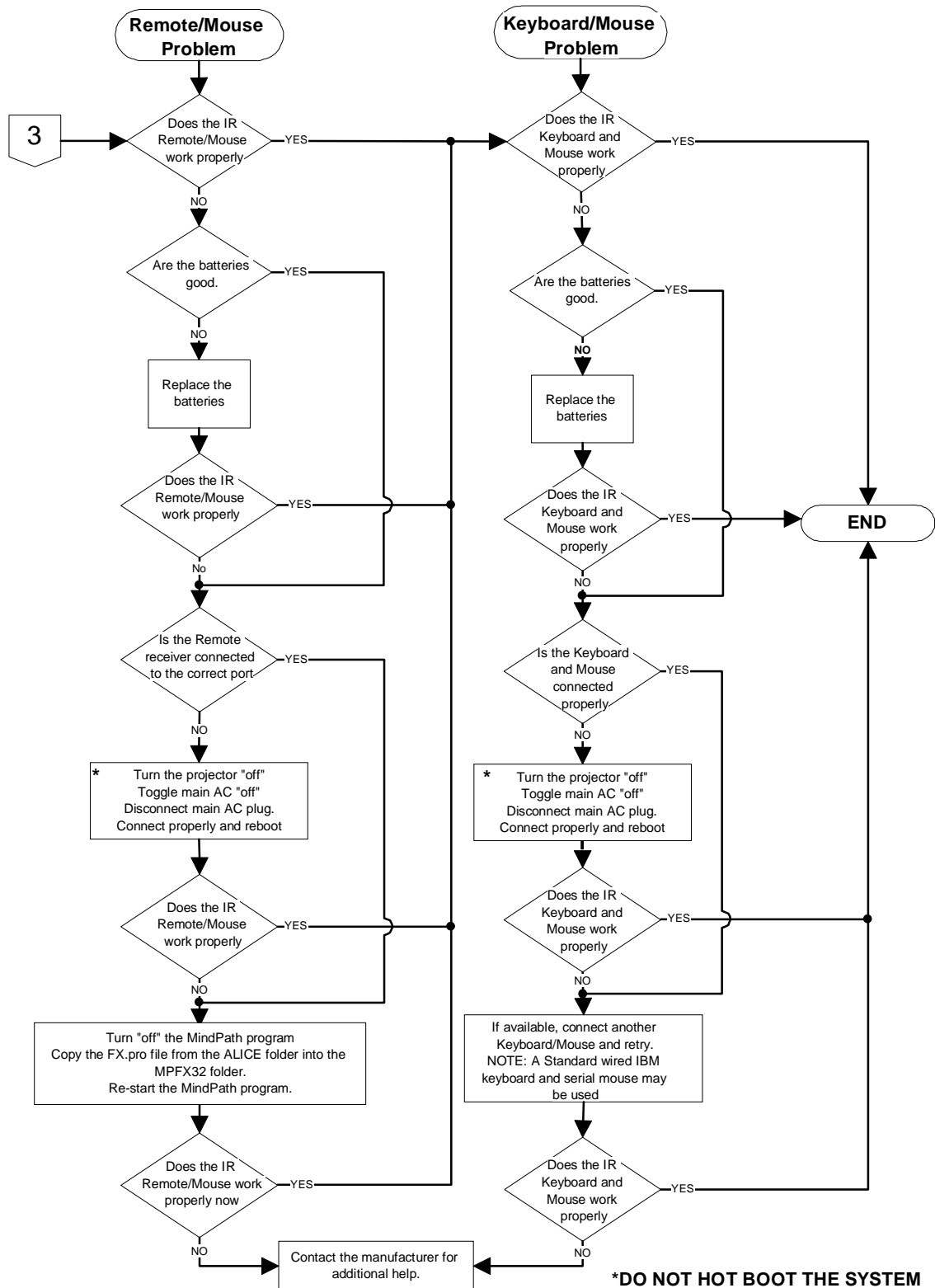
Start

- Step 1. If desired, connect an external monitor to the VGA “out” port
 - ◆ The VGA “out “ port connector is located on the PC card cage. Open the front access door. The VGA “out” port is in the XXX slot from the right as viewed from the front, table mounted.
- Step 2. Apply main AC to the projector and toggle the main AC switch to the “on” position.
- Monitor the boot sequence.
- The normal boot-up sequence for the ALICE projector is as follows:
 - ◆ The AmPro 5200 follows an initial “power-up” sequences from the time the main AC is toggled “on” to the time an image is displayed.
 - ◆ With the two IR Receivers connected, plug the main power cord into the receptacle. Toggle the main AC switch to the “on” position. The projector will automatically start, first displaying the custom Windows boot-up screen, and then the Scan Disk operation will be evoked.
 - ◆ Once the Scan Disk operation has completed, the projector will automatically start the ALICEXGA program and all associated programs.
 - ◆ Once all programs have booted, an automatic search for an external source will start. If an external source is present, the projector will auto-select or auto-setup the source. If no external source is present, the projector will switch to the internal graphic channel.
 - ◆ NOTE; if more than one external source is present, the projector will switch to the “last source” selected prior to the last shutdown.

Flow
Chart 1

Flow
Chart 2

Flow
Chart 3



- BIOS Configuration** Press <Delete> to enter the main BIOS screen and check the following parameters
- ❑ **IDD HDD AUTO DETECTION**
 - ◆ Select the setting that includes LBA mode
 - ◆ Press <Enter> three more times and answer NO to each prompt.
 - ❑ **STANDARD CMOS SETUP**
 - ◆ Be sure primary type = user, mode = LBA, and reported drive size corresponds to actual drive size.
 - ◆ Enter correct date and time
 - ◆ Set HALT ON to NO ERRORS
 - ◆ Set drive A to 1.44M, 3.5 in.
 - ◆ Set VIDEO to EGA/VGA
 - ❑ **BIOS FEATURES SETUP**
 - ◆ Boot sequence is C, A
 - ◆ Boot UP Num Lock is *OFF*
 - ◆ P/S2 mouse function is *enabled*
 - ◆ Exit to Main menu
 - ❑ **CHIPSET FEATURES SETUP**
 - ◆ Auto configuration is *enabled*
 - ◆ DRAM timings is 60ns
 - ◆ System cacheable is *enabled*
 - ◆ Video BIOS cacheable is *enabled*
 - ◆ Exit to Main menu
 - ❑ **POWER MANAGEMENT SETUP**
 - ◆ Power Management is *disabled*
 - ◆ Exit to Main menu
 - ❑ **PNP/PCI Configuration**
 - ◆ Resources Controlled By is *Auto*
 - ◆ Exit to Main menu
 - ❑ **INTERGRATED PERIPHERALS**
 - ◆ IDE HDD Block mode;.....*enabled*
 - ◆ IDE PIO for all four ports;.....*enabled*
 - ◆ On Chip Primary and Secondary PIO;.....*enabled*
 - ◆ PCI slot IDE 2nd channel;.....*disabled*
 - ◆ Onboard FDC controller;.....*enabled*
 - ◆ Onboard UART1;.....*3F8, IRQ4*
 - ◆ Onboard UART2;.....*2F8, IRQ3*
 - ◆ Onboard Parallel Port;.....*378, IRQ7*
 - ◆ Parallel Part Mode;.....*normal or SPP*
 - ◆ Exit to Main menu

Select SAVE & EXIT, then enter “Y” to the resulting dialog box. System will now re-boot.

**Safe Mode
Operation**

Windows® 95 will automatically initiate Safe Mode if it detects that the system start-up has failed, for example if the Registry is corrupted, or an application has requested Safe Mode. Sporadically, Windows® 95 will start Safe Mode for no apparent reason. If this is the case, simply rebooting the system will resolve the problem.

To access Windows® 95 Startup Menu, when you see the message "Starting Windows 95," press F8.

At times, simply pressing "NORMAL" at the Startup Menu will resolve the problem.

Use Safe Mode for system startup situations such as the following

- ◆ If Windows® 95 fails to start after the "Starting Windows 95" message appears.
- ◆ If Windows® 95 seems to stall for an extended period.
- ◆ Windows® 95 doesn't work correctly or has an unexpected result.
- ◆ If you cannot print to a local printer after attempting other troubleshooting steps.
- ◆ If your video display doesn't work properly. In the case of the ALICE, connect an external monitor.
- ◆ If your computer stalls repeatedly.

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